


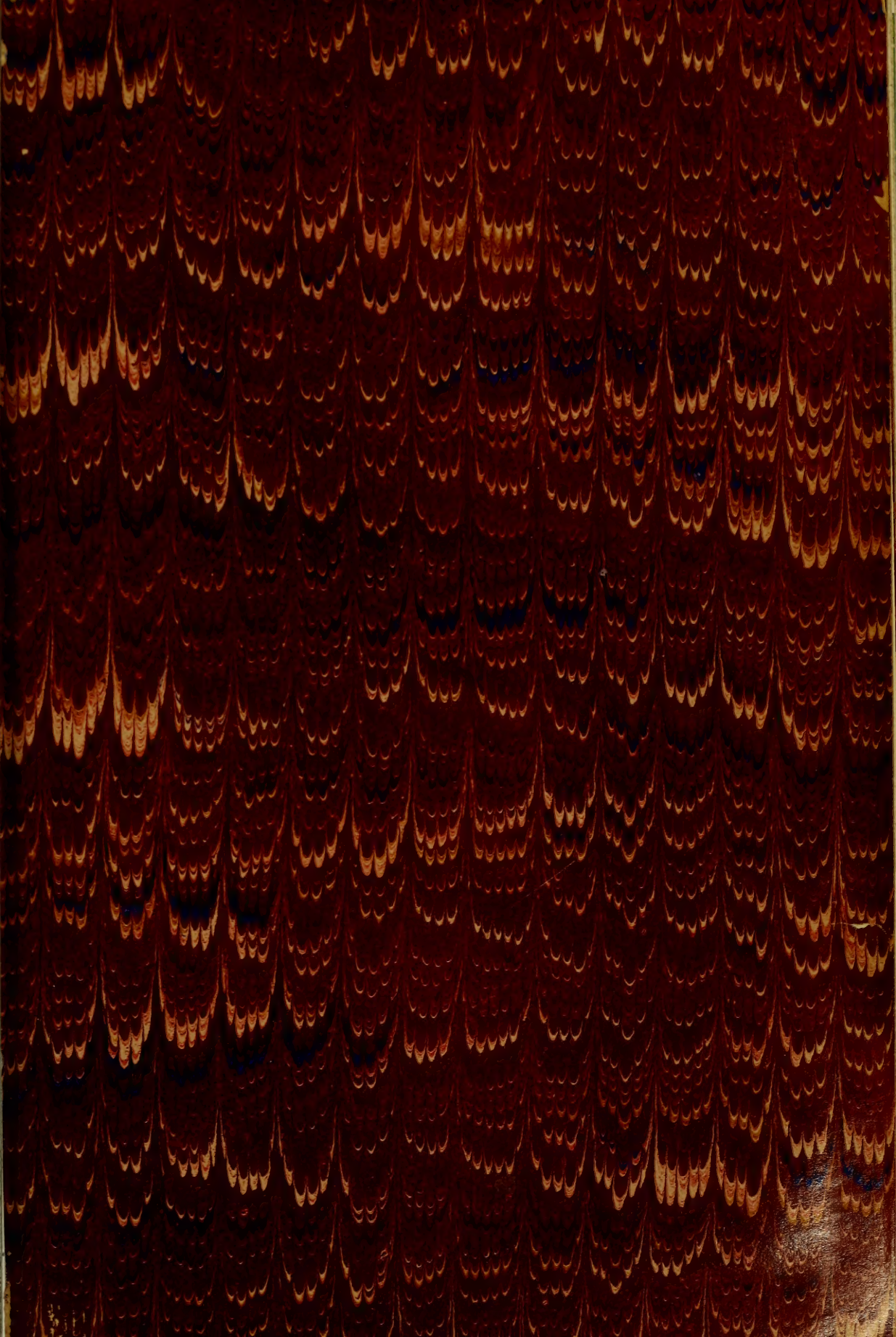
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CAMERA CRAFT



Price 10 Cents

San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CAL.



THE PURITAN MAIDEN PRISCILLA
by ANNIE W. BRIGMAN

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX

SAN FRANCISCO, CALIFORNIA, JUNE, 1904

No. 1

Some Experiments with Platinotype Paper

By WALTER ZIMMERMAN

Ninety-nine per cent of the users of platinotype paper have no knowledge of its use, except the apparently very full printed directions wrapped up with it and contained in the tin box. This ninety-nine per cent naturally includes many of the most expert professional photographers; my meaning being that very few photographers know that there is a world of fascinating knowledge in the employment of these iron-platinum papers beyond the careful directions, or rather absolutely in violation of them.

These variations are most useful, and give the following results:

1. It will rarely be necessary to waste a piece of platinotype paper on account of it being either over-printed or under-printed.
2. Platinotype paper damaged by age, heat or dampness need never be thrown away, and it may be used for brilliant and even artistic pictures.
3. "Soft" prints may be made from harsh negatives, and
4. Brilliant prints can be made from flat, and apparently worthless negatives.

It may be thought a rather difficult task to prove all of these propositions, but I can not only do all of these things myself, but can promise that others may do them by carrying out the suggestions which follow:

Under-Exposed Prints

When a print has been taken out of the printing-frame too soon, and, when too late, it is discovered that it would be worthless if developed in the ordinary way, then every bit of the effect of the sunlight has to be coaxed out of it in a very simple manner.

When only slightly under-exposed, heat the strong oxalate developer up to, or a little beyond blood-heat, so that it feels quite warm to the finger. Lay the print flat in a clean tray, face up, and pour the warmed developer gently over it, giving a circular motion to the hand, in order to cover the print uniformly.

When decidedly under-exposed, the developer has to be brought to its highest chemical efficiency, making sure of saturation by adding oxalate of potash crystals, and by heating nearly to the boiling-point. If actually boiling, bubbles are apt to form on the print. Undissolved crystals or other sediment should not, under any circumstances, be allowed to touch the sensitized surface, as they cause white spots. While it may not pay to heat the developer to save a very small print, it certainly does pay with the larger sizes of paper. Besides, a very pleasing rich

black-brown tint results from this treatment, giving a distinctive effect from the usual blue-black of platinotype. Another peculiarity is the "softening" of the print, which will be referred to later.

Over-Exposed Prints

A piece of platinotype paper which has remained a little too long in the printing-frame, and which shows the entire image as if it were printing-out paper, will, if developed by the ordinary method, blacken so thoroughly as to be useless. Reduction of platinotype paper after development being impracticable (treatment with *aqua-regia* being a useless experiment) such a print is worthless. The simple remedy is to dilute the oxalate solution to correspond with the over-printing, as follows:

1. If the over-printing is but slight, the saturated oxalate solution should be diluted with an equal quantity of water.

2. If the over-printing is decided, the ordinary developer should be diluted with fully five times the quantity of water.

3. If there is a strong image, fully printed out, the proportion of water to normal developer should be ten or even twenty to one.

4. If the paper is darkened, so that the image is hardly discernible, use scalding hot water without any developer.

5. If the high lights have become dark or light and the shadows "reversed" to a light tint, the effect being that of a negative, develop in plain water of ordinary temperature.

6. If the print has reversed a *second time*, and the print has again become a positive, the print is presumably worthless, but it might be worth while to add five or ten drops of muriatic acid to a pint of ordinary water, and try the effect.

It should be borne in mind, however, that the further we advance along this line of treatment, the greater is the contrast obtained, this contrast being useful with some negatives and detrimental with others.

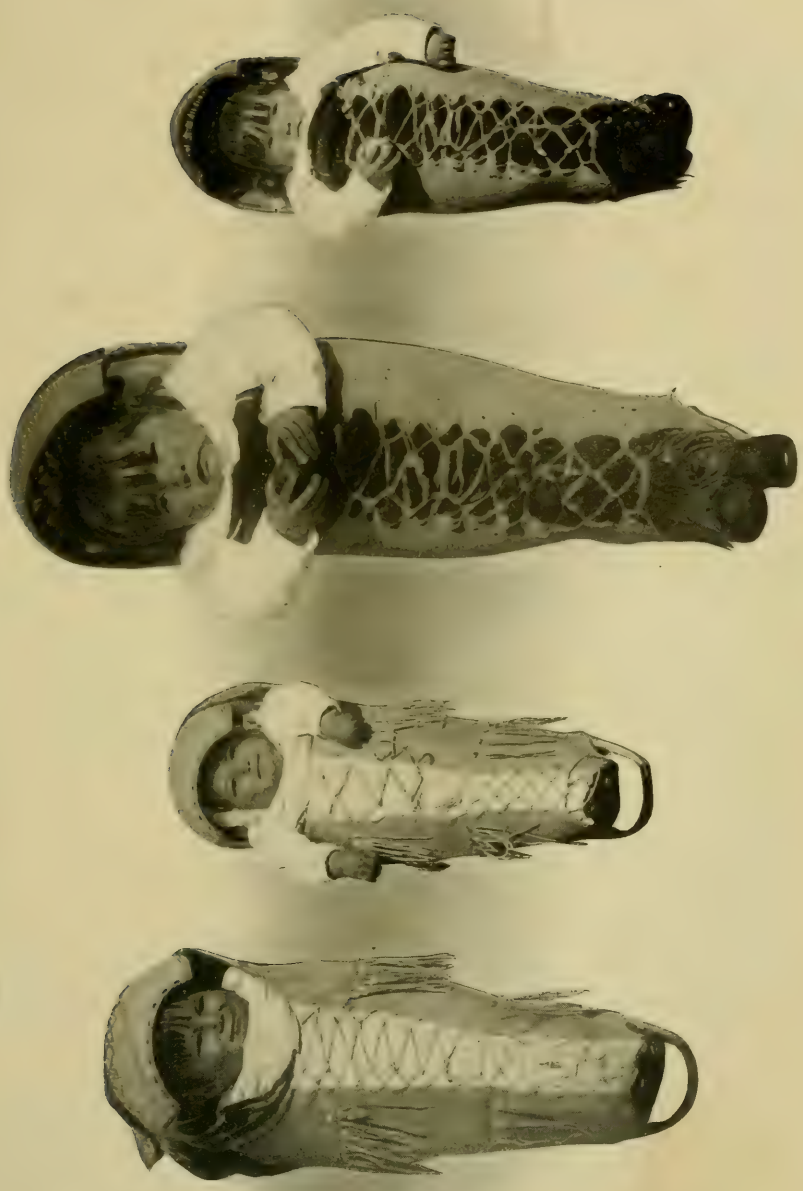
By the above it will be observed that fair to good photographic prints can be obtained, notwithstanding great degrees of under-exposure and over-exposure of platinotype paper. The quality of the picture so modified may suit the purpose of the photographer quite as well as a normal print, in some cases better, while in others the print may be useless. The quality of the negative is the determining factor as to the beauty and usefulness of prints obtained by these abnormal methods, and you may know beforehand just what to expect.

For instance, you will know from the foregoing that a harsh, over-contrasty negative will yield a soft, rich print if properly exposed, and developed with warm or hot saturated developer.

On the other hand, a "stale, flat and unprofitable" negative, which, with the most careful printing by orthodox methods, gives equally flat and uninteresting prints, can be made to yield really brilliant pictures by over-printing and then diluting the developer.

How to Improve Prints by Modifying the Developer

The first step in learning these "tricks" in development is to save the prints supposed to have been spoiled by careless printing.



FOUR OF A KIND
By MRS. W. D. LINTON

The second step is to learn how these "tricks" may be purposely used, in order to produce certain desired effects in platinotype printing.

The method of using faulty negatives, as usually recommended, is diametrically the reverse of mine, and is erroneous, as experiments will demonstrate.

To Increase Contrast

Take a negative which was over-exposed or under-developed and which, while containing some detail, is lacking in contrast. How can such a negative be successfully printed? To illustrate the answer. Among my negatives is one of Mont Saint Michel, France, a negative which was much over-exposed, and is, therefore, of almost uniform density. The utmost care with ordinary methods failed to show anything but a "muddy" looking print. I had received a box of paper, dated five years back, given to me in fun, by a friend, and I tried the experiment of using this bad negative and bad paper to make a good print. A paradox and an impossibility, the reader may say. The paper was so bad that the developer *without exposure* would blacken it, and so brittle that it crumbled with rough handling. I printed a piece of this paper with my bad negative until the whole surface was a rusty black with not a trace of an image to be seen. I then heated some water to boiling, and laying the wretched looking print face upwards in a dry tray, poured the boiling water over it. The result was a brilliant picture, so fine as to receive praise in a competitive exhibition. Except for this process it would be impossible to produce such a result from such materials. The paper itself had "aged" to a buff color and the iron deposited on the finished print was of a rich, deep brown. Every line and half-tone was perfect. The thing is so extremely simple that every person can accomplish the same result. Prints so made should be cleared as usual, but the acid bath (one to sixty) should also be scalding hot.

The employment of worthless old paper is not needful, as good paper may be treated in the same way to produce contrast and brilliancy. The experiment which I have given for illustration of the process shows the great latitude which is possible with platinotype paper.

For still greater contrast, the printing should be continued until the print becomes absolutely "negative," the shadow being bronzed to a straw tint, and the high lights a "foxy" black, as already mentioned. Development in plain *cold water* will give an unusual "stunt" in the way of photographic printing, and, in some cases, the result is pleasing and artistic. This is most likely when a flat, "muddy" negative is used, but the method is rarely satisfactory in portraits.

To "Soften" Contrasts

On the other hand, a hard, untractable negative may be harnessed down to do good work by not printing it too deep (the temptation being in that direction, in order to get detail into the high lights); but, instead, using the chemical action of the developer to the fullest extent. Oxalate of potash crystals should be added, and the developer heated to boiling, although it is better that it should not be actually boiling at the moment when poured on the print. Such prints are soft and of a rich brown-black color, and are almost as surprising for their fine quality, under the circumstances, as the brilliant prints from weak negatives obtained by the opposite method.

To Make Use of Old Paper

Platinotype paper which has passed beyond the date limit ought never to be thrown away. It should be saved for the "mean," flat negatives, as already hinted at. Paper which has normally passed far beyond its time limit of usefulness will change to a muddy black color when placed in developer without any exposure to light. The very old paper used in my experiment, would have turned black in the oxalate, without exposure. The heat of several summers had decomposed the platinotype salts, leaving the less perishable iron salt remaining to be acted upon by the long exposure to the sun's rays. The chemical changes which have taken place in the paper are then offset by the dilution of the developer or the use of hot or cold water, according to the depth of printing, as first described.

Summary

For "soft" pictures from harsh negatives do not over-print, but use hot developer, full saturation.

For brilliant pictures from flat negatives, over-print and weaken developer, or even dispense with developer.

For stale paper, over-print and develop in hot water.

For "low tones," over-print and use weak developer.

Clearing and Drying

In every method here described, the finishing process is the same as with normal development: weak hydrochloric (muriatic) acid baths, until there is no trace of yellow in the water, and prints then to be washed in running water for a few minutes. Where development is with hot or cold water without oxalate, the clearing bath (60 to 1, muriatic acid) should be scalding hot, to remove the remaining iron more effectively.

The best way of drying photographic prints of every kind is to hang up by one corner, so that any trace of chemicals may drain off rather than dry into the print.

No photographic paper is capable of such beautiful results, nor of so great a variety of results, as platinotype paper.

I am not at all sure that I will convince all readers that the methods here described should be constantly used, but I think that all will agree that the results of these experiments are both interesting and curious, with at least occasional effects which are far superior to the results of careful normal exposure.

Printing Through the Paper

There is another trick or "stunt" which may be employed with any photographic printing-paper, but most effectively with platinotype. It is to turn the paper upside down in the printing-frame, so that the white side is next to the film. The sensitized surface is then printed from the back, which distributes the light in a way that is particularly agreeable to those who like very "soft" effects in photography. The texture of the paper gives a more pleasing effect than the atrocious "bolting-cloth" method which had some vogue a few years ago. This effect of distribution of light may be increased by turning the plate over also, so that the objects will not be reversed as to position, as is the case when the paper alone

is turned. Let the reader try this reversal of both plate and paper with a large marine view negative, and he will have a new picture, and, probably a fine one, with "atmosphere" and a little mistiness. The rougher grades of paper are the best for this work. Printing and development are, of course, as usual, but the time required for printing is ten to twenty times that by the normal method, according to the thickness of the paper used. One more personal reference, to illustrate just how this photographic "stunt" may be useful. I had made one of those rare snap-shots, two or three years ago, of a schooner in Boston Bay, with long trailing shadows of its masts and sails in the calm water. An enlarged plate, made for me professionally, was so absolutely perfect that it was simply as "hard as nails"; and while friends gladly accepted copies—and that's some tribute—the juries invariably passed it by on the other side. I tried the "other side" too, by the "turning-over" process just described, and the juries then thought differently.

I will, in conclusion, give the reader one more trick in printing, not confined to platinotype, which, as an experiment, will be found to be most interesting. Take a profile portrait negative, and from it make a contact positive. The negative should be strong and the positive weaker. One of the two, it does not matter which, should be on a film, such as from a "Kodoid plate," or a cutting from a roll film. Place negative and positive together, so that they will "neutralize," as opticians say, and form an almost uniform black surface when held up to the light. Then shift them a hair's breadth, until an outline appears upon them, holding the two, positive and negative again up to the light. Attach the two by narrow pieces of gummed paper, so that they will not slip, and lay a piece of sensitized paper next to the film. Of course, it will take a good while to print through both negative and positive. The outline should be deeply printed. The result, when developed, will give a "bas relief" or "statuary" effect. This method is particularly suited for full profile portraits.

To Prevent Developing-paper Prints Curling

By MILTON WAIDE

Lay out blotters. On these place muslin from which starch is washed out, and keep the muslin for just this purpose. Take prints from the wash water and lay face down on the muslin. When prints are just dry enough so that films will not adhere, and yet while quite damp, they are rolled film out, around a roller one and one half to two inches in diameter (I use a piece of background roller, the sort they are shipped around), then a small rubber band is placed around each end and the roller removed, leaving a circular form of the rolled prints. All are prepared in this manner (it takes less time to do than to tell), and they are allowed to become stone dry while in this shape, thus allowing the pores of the gelatin film to stretch. The rubber bands are then removed, and if necessary, three or four prints at a time are rolled the other way around the roller to make them lie flat. Having been stretched while drying they will not curl again. I find it advisable when heavy paper with smooth surface is used, before placing on the roller, to curl the ends of the print backward with a ruler in order to prevent the sharp edge marking across the face of the print during the drying process.

Encouragement for the Home Worker

By E. W. HUMPHREYS

Illustrated by the author



Fig. 1

THE FIRST PORTRAIT I EVER ATTEMPTED

that have been kindly received by critics.

I have never worked for portrait or figure studies with other than the lighting to be secured from an ordinary window, except once, when I found that the lighting of a narrow side portico made a good substitute for the large slant window of a studio, though not admitting of much control.

The first portrait I ever attempted was a wonderful piece of work. I used the light from a window, wide open, with nothing to reflect on the shadow side, and secured a result that would satisfy the most rabid impressionist. (See Figure 1.) I have since learned that diffusion and proper control of light are more important than quantity.

In ordinary side lighting from a window, one can usually secure good results if the lower half of the sash and sometimes the lower half of the

First let me state that I am an amateur of only a few years standing, making no claim to an extensive knowledge of photography. At the request of the Editor, I am merely recounting such experiences in portraiture as I have attempted.

Two points to be emphasized most are that neither an expensive outfit, comprising special portrait lenses, etc., nor any lighting that cannot be secured in the average home, are necessary to creditable work, if the operator be sincere in his desire to do his best. My only camera, the one I still use, is an ordinary 5x7 of the cycle (folding) type, equipped with the usual rectilinear lens, which lacks even the name of the maker. The outfit cost about fifteen dollars three years ago. With it I have turned out some few things that have secured recognition at recent Salons, and more



Fig. 2

MADE BY THE LIGHT OF AN ATTIC WINDOW

upper sash are covered with some opaque material, using only light from top of window, diffusing the same if too glaring with a piece of waxed paper or thin muslin, and using some light material to reflect on shadow side of face.

If you have a sitter or model who can stand a lengthy exposure, the light from one upper pane of glass properly directed on sitter (every other source of light in room having been curtained) will secure some fine effects.

Should a variation in lighting be desired, a modification of a plan described by J. Wells Champney, in one of the *Annuals*, is easily made at any window having a roller-shade. Tack over lower part of window a perfectly opaque blanket or



Fig. 6

IF YOU HAVE A MODEL WHO CAN STAND A LENGTHY EXPOSURE

shade, at a height a little above the head of the sitter. This may also serve as a background. Place sitter with back to this, facing room, drawing roller-shade down and out at an angle from window, only far enough to exclude direct light from window entering lens of camera when set up at proper height and distance from subject. A string across room or any temporary arrangement will hold curtain at this angle, and the light from the window will be reflected downward on sitter, giving a pleasing effect.

In any lighting, time under the focusing-cloth, studying closely the effects as revealed there, is well spent. An exposure will never give you anything more than is shown on the ground glass, and until one's eye is trained to be expert in



Fig. 3
TAKEN WITH LIGHT FROM THE UPPER HALF
OF A SMALL WINDOW

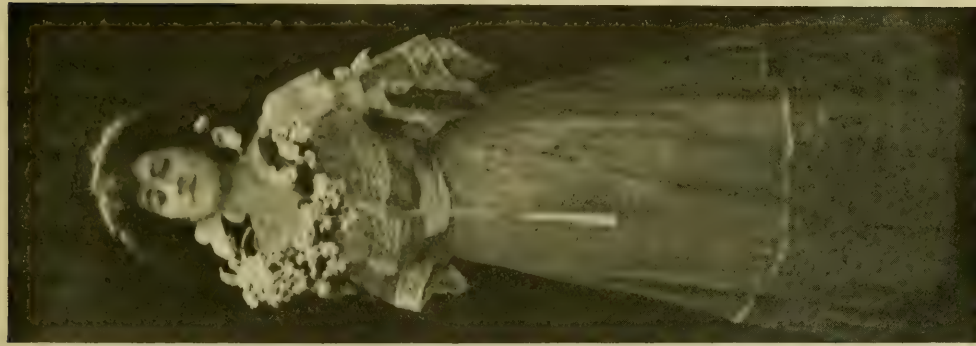


Fig. 4
ANOTHER EXAMPLE OF TOP LIGHTING



Fig. 3B
THE LIGHT BEING REFLECTED DOWNWARD



Fig. 6B
MADE IN AN ORDINARY ROOM

noting the changes of light and shadow, aim to secure on the ground glass just the effect you are after, before making the exposure.

Endeavor to direct the strongest light on the face. If window be low, this is best accomplished sometimes by placing subject on a low stool or on the floor, if only head and shoulders are wanted.

Figure 2 was made by the light of an attic window at side of subjects, the shadow side being relieved sufficiently by a window directly in front of the sitters, several feet behind the camera. The background was made by a red silk shawl pinned to the wall. Figures 3 and 3B were taken with light from upper half of a small window, relief for shadow side being obtained by a wall opposite, the subject being half way between wall and window; the taker with face turned from the light. Figures 4 and 4B are examples of the top lighting made with a window-shade as described. Figures 6 and 6B were made in ordinary rooms, and show what can be secured in the way of variety by giving a little attention to the direction of the light.

If situated as I am, in a small town where there are scarcely any photographic enthusiasts, try in some way to get in correspondence with a few advanced workers. If you are as fortunate as myself, you will probably arrive at this conclusion, viz: that in no class of workers are there so many helpful natures as are numbered in the fraternity of amateur photographers. To the kindly encouragement and helpful

hints given me by those well along the road I hope to follow, I owe more than I can repay, and the friendly relations established by correspondence with those I have never seen will ever be a source of pleasant remembrance.

I have not much more than commenced my knowledge of the possibilities of my camera. What I have acquired has been mostly from experience, and, after all, with ever so much helpful literature at one's hand, the knowledge that comes from actual work is the best. Once having mastered the easily acquired A B Cs of proper timing, developing and ordinary printing, then every additional step in the work should prove of absorbing interest.



Fig. 4B
PORTRAIT STUDY WHERE LIGHTING
IS CONTROLLED BY WINDOW-SHADE
By E. W. HUMPHREYS



"UP IN THE AIR"
By THOMAS W. SNYDER
Student of the American School of Art and Photography

Where Is Photography Leading Us?

By H. FLORENCE OLIVER

We each have our own little story as to how we were led into photography; stories that are interesting to ourselves and perhaps to a few others. The majority of us know the story of the struggle with the technical part of the work too well to wish to hear it again, while the minority are doubtless reading the story now as each day's work unfolds it to them.

The persevering, determined students have come to the second volume, which tells so much of beauty and quotes so many things from Nature. The second book is vastly more interesting than the first. It gives you so much more freedom and individuality. It tells you so much more of beauty and gives you a better acquaintance with Nature than you had knowledge of before, or the means of obtaining.

It is no doubt apparent to all students of the second book that the study of it develops to a remarkable degree the use of one's eyes and the power of one's brain, while one's faculty for pure happiness becomes tuned to a finer, sweeter, higher harmony. It is worth a struggle to be able to see a little clearer, to feel a bit deeper, to know somewhat more, than the ordinary existence and the first appearance of things have hitherto given us.

Is it not, therefore, worth our while holding faith to the end of the second book—if it have an end,—that we may know the remainder of the happy story? Surely, there must be more to this story than we yet know; for, like life itself, we have not been led on thus far but to find it all a huge, horrible joke without other meaning or cause for being. There is no reason nor justice in such a conclusion as its being a farce, a joke.

In fact, have we not already come to possess more freedom, more individuality from reading from the second book than was obtainable from the first? Then is it not reasonable to suppose that even more of freedom and individuality will come from a further study of this second volume?

Into what particular specific ways photography is leading us, no one knows, though we all freely conjecture. Truth to tell, how many of us care to know, for half the zest of this pursuit of ours is in arriving at the bits of chance that are always appearing. And if we did know what was before us, how well would we comprehend the matter? Probably about as clearly as we understood pictorial photography while struggling with the technical part.

It is at least something, is it not, to be able to enjoy more deeply the great out of doors than was possible before? It is something, is it not, to feel Nature's moods more truly, to see her beauty more clearly? It is of some avail to know that we, ourselves, have developed to a higher plane of life.

The future of photography holds more of beauty, happiness, freedom, individuality, knowledge than we have even yet come to, and this at least is a reason for our studying faithfully in the second book. We are all aware that photography has grown in importance within the last dozen years; and the present day does not picture it in a declining state of health.

It isn't by the intensity of a fad or by the amount of facts that we are to judge of the true health of photography, but rather by the amount of happiness

it gives, the knowledge it unfolds, the love it creates. And the class of steadfast, ardent students of photography is on the increase. And why? Because when they become free from the drudgery of the technical part, they begin to realize what it means to know of, see, study and create beauty. Photography offers a wide field, apparently one without fences, wherein the student can enjoy the great big open; can be more free, and happy, and natural, and healthy than other amusements, or studies, or kinds of labor offer him. Because, too, photography reaches a class of people who have not developed far enough to handle the brush or pencil, yet love beauty, Nature, the artistic, just as intensely as any artist; who longingly desire to express the beauty they see and feel, and in photography find a means for its expression. Such people are just evolving into the artistic world and



A MARIPOSA "CANARY"

BY JOHN SHIRA

therefore find photography a stepping-stone across the stream. It is these people who in reply to the question, whither is photography leading us? can best answer: to a higher conception of beauty and art, and to a freer scope for the using of their creative power, and a better development of their individuality.

If, then, we have been able to travel thus far on the road, surely there is more beyond. And though we cannot tell what it is, yet do we not feel that it is a better something than we have yet found? If what we have already found in photography was worth the effort,—and where is the amateur to deny having found something of happiness?—then is it not worth a further effort and a bit more of faith to keep on the road till we find a higher goal to reach; and when found but few will need urging to go on to it, I'll warrant you.

The future of photography is like the future of life and its many interests—vague, mysterious, yet full of hope. And in this as in other things, we must keep everlastingly at it, making the best of what material we have on hand and always expecting better.



An All-Round Camera

By H. D'ARCY POWER, M. D.

Illustrated by the author

When a man begins to get deep into photography his wants multiply and his pocketbook decreases. Some years ago the writer, who many years before had had a little photographic experience in wet-plate days, bought him a 4x5 Poco. Some rather good pictures resulted, but they looked so wretchedly small that at the end of the month he took it back to the store and exchanged it for a 5x7. That answered all right until the local club gave an exhibition, when the writer's 5x7, that looked nice enough in an album, cut no figure against the 8x10 and 11x14 of the other fellows. So an 8x10 was bought and faithfully trudged over many a weary mile. The climax came when on a hot summer morning it was dragged, plus six plate-holders, from the bed of the American River to the top of Cape Horn, many hundreds of feet above. As a general working instrument the 8x10 was condemned and a long extension, 5x7 Graphic, took its place, but as exhibition pictures had to be provided for, an 11x14 was added for specially selected work. Add to this a Stereo Weno, and a specially built hand-camera to take the overgrown planar lens and it will be apparent that the growth of the original 4x5 outfit has been as prodigious as the scriptural mustard seed. Now the writer does a great deal of photographic work—scientific, stereoscopic and pictorial—and this armory of instruments is useful enough, but somehow it always happens that when there is a sudden call to do special work it is the wrong instrument that is along. Nor is it convenient to carry two or three on an ordinary outing. While revolving this aspect of the question and meditating an order for a special box to be his constant,

and for the most part only companion, the writer met the late President of the California Camera Club on an excursion apparently without an instrument, until from the recesses of his great coat he brought forth a long, flat camera that we have since learned to know as the Folding Pocket Kodak No. 3. So much was I impressed with the general get-up of this instrument, that I added one to my collection, and after six months' daily experience of its use I find myself depending almost exclusively upon it for all classes of work. How and why it has this position I will endeavor to show. To begin with, a man who does much work ought to have a camera with him at all times—for the best opportunities come when least expected. Of course there are plenty of pocket cameras that meet this want, but they give such small pictures that unless enlarged they have little interest.

Such is the case with and it is not much which is most waste-such that nearly altrimming down. The in its proportions, consider the proporsame way as naturalportions of the skull, breadth in relation to 100, we find that the era is 90. If the trouble of measuring of the landscape prints lons or published in the most pleasing and work, he will find that pretty near to that of away from the 4x5 The user of the latter away the top and botit approaches the lowvolves a loss both in



the popular $3\frac{1}{4} \times 4\frac{1}{4}$, better with the 4x5, ful, as its height is ways it needs much new camera is unique $3\frac{1}{4} \times 5\frac{1}{2}$. Now if we tions of a print in the ists describe the prothat is, consider the the length taken as index of this camreader will take the the sides of a number exhibited at recent sa-the journals, that is, artistic of modern their mean index is this camera and far box whose index is 80. form generally trims tom of his print until er index, and this in-film and paper.

Furthermore, the new form adds to the length what it takes from the breadth with the result that we have a print that if care be taken in the proper placing of the view by the finder, will not be much smaller than that we obtain from a 5x7 after trimming. Such a print is of sufficient size to be attractive without enlarging, and will yield an excellent 11x14 if the latter is resorted to. It is for this reason that I now so rarely take out my heavy long draw 5x7—there is so little to choose between the results and such a difference in convenience. The camera can be used with films or plates, but if the latter be used the extra half inch over the film is lost, and except for technical work requiring very fine focusing, there will be few who will care for a plate attachment. The focusing scale is graduated in the usual way in both feet and meters, but the makers do not appear to have realized the full capacity of their instrument. I find that by pulling the bellows forward to the extreme limit of the board I can take a picture at $3\frac{1}{2}$ feet, this in the case of heads and busts does away with the need of a supplemental lens



for portraiture, which is a step in the right direction. The mechanical arrangements of the camera are excellent, the rising front and lateral movement being easily applied and very useful. The only defect that the writer has experienced is in the position of the ferule for the tripod screw, this is placed to the side instead of the center of the baseboard with the result that there is a tendency because of the weight of the camera to cause it to sag over sideways. This ought to be rectified. The length of the camera permits of the use of a lens of reasonable focus. I do know whether this would permit of the use of a telephoto such as the Adon, but I believe it would. By simply moving the camera laterally two and one-half inches and making two exposures I have made excellent stereograms. This may be done so quickly that I have thus made stereograms of the face and body for scientific purposes without any difficulty. The lens supplied is the regular Kodak rectilinear. (It may also be obtained with Goerz Double Anastigmat and



others.) All the illustrations here given were made with it. The image is very good and stands ample enlargement.

Three years ago I entirely discarded plates for the Seed orthochromatic cut film, but the fact that there was not then an orthochromatic roll film on the market, prevented me from using that form notwithstanding its many advantages, nor would I now write in favor of this new camera were it not that the Eastman Company at present supply such a film in the N. C. which is not only non-curling but highly sensitive to both yellow and green. This film is destined to entirely replace the old form here as it already has in Europe, and all who have not used it should try it at once. All things photographic have ways of their own, and so has the N. C. film. Their orthochromatism is as high as that of the average ortho plate,* and they give a very much improved rendering of nature without any yellow screen, but as every worker in this field knows, the best results are only to be obtained by the addition of a screen. And here is where I would give the warning. The screen alters the focus, and those who desire to use one must take off the back of

the camera, replace it by a piece of ground glass, put on their color screen and focus on a distant scene, and make a mark on the baseboard of the camera at the then position of the scale pointer. Focus another object at six feet and again mark and so for the other distances. The new focusing scale will be found some distance behind the regular one. This disturbance of the focus by the yellow

screen is not mentioned in the Kodak instructions, but a quarter of an hour's work will put it right, and it is well worth the trouble. The accompanying cloud picture of cumulus on a bright blue sky could not have been otherwise secured. The N. C. films when hand developed present no greater difficulties than the old form, the glycerin bath being replaced by one of alum (which

must not be omitted), but if the machine be used, some special care must be exercised. The layer of gelatin covering the back of the film (which renders it absolutely non-curling) is apt to stick to the black paper covering the roll, and if the fixing be done in the machine the hypo will so harden this adhesion as to make the stripping of the film from the paper one of great difficulty; if however the new directions are followed, and the film is, after washing, removed from the machine for fixation, there will be little difficulty.



IN TIME OF PEACE

BY MRS. ALICE HARE

Personally, I am using the developing machine all the time, and this combination of the F. P. K. No. 3 with the N. C. film and a developing machine has simplified my work 500 per cent. I do not for a moment suppose that this is the last word in camera progress, nor have I any intention of giving away the rest of my outfit, but I am quite sure that if I could afford to buy but one camera for all purposes it would be the one I have described.

Educating the "Photographic Eye" in the Home

By D. H. STOVALL AND C. L. CLEVENGER



WE hear the expression quite often; "cultivating the artistic eye," but cultivating the "photographic eye" is a good substitute as a means of creating artists in our homes by developing them from members of the home circle. Some measure of art appreciation is sure to follow the use of the camera, and where there is a taste for art there is sure to be more happiness, more enjoyment and greater beauty. Its devotees are taught to see the beauties of nature, the harmonies that are all around us in line and mass, in fact, one is taught to see and enjoy those things that can give pleasure yet would undoubtedly be passed unnoticed but for the cultivation of their "photographic eye."

Such an eye sees beauty and harmony, grace and pleasure-giving arrangement; in fact, sees pictures on every hand. The old grapevine that creeps, climbs and clambers up the big oak and over the kitchen door and roof becomes a thing of beauty; an inexhaustible mine of pleasure. The old rail fence behind the orchard with its load of wild blackberries and rose-bushes is no longer an eye-sore but a veritable studio accessory, around which are posed lovers, happy children, aged



and kindly friends and even the domestic animals that are so easily made such pleasing subjects for our photographic skill. The laughing, frolicsome children on their way to school, are no longer noisy and irritating, but arrange themselves in artistic groups and pretty poses; the vase of roses gives off more than its fragrant perfume; and the fruit-dish, fruit-laden, has something more to do than satisfy an empty stomach. Yes, the world becomes a gallery of gorgeous pictures to the "photographic eye."

We have in mind a home where there was no artist and no art, and likewise but little harmony. Then a birthday came and among the presents was a kodak,—



THE ESPY CROSSING THE LINE

BY H. L. HANSON

just a plain black box with a small glass eye on one side and a small trigger, which, when touched, would make the eye suddenly open and close. But through that small glass eye a human eye peeped, and a "photographic eye" developed. Now, instead of a kodak there is a camera, and in that home there is an artist, and art is there too, with harmony and beauty and happiness.

The time will be when every child will be taught photography at school, but until that time comes every home should have a camera—a small camera. The artist and art will inevitably follow.

The cost? A mere trifle it is, not to be considered as a wasteful outlay to gratify a childish whim, but as a tuition fee for an education that develops the "photographic eye,"—the artistic eye. Photography long ago ceased to be a craze and has become a well-established, semi-scientific study. A recognized avenue through which the artistic nature is given an opportunity to assert itself.



MOTHERHOOD
By ANNIE W. BRIGMAN

“Taken, Finished and Delivered in Ten Minutes”

By BERNARD C. ROLOFF

About two years ago I received a printed invitation from a local department store to have my picture taken there, the ad. stating that it would take but ten minutes to do the trick and deliver the finished pict—I beg pardon, I mean *product*. Being rather curious to see how this could be done I called upon a friend who was manager of the amateur photographic department in the store. Through his influence I was permitted to examine the “works.” I found that the pictures were not tintypes, but actual black and white prints upon postal cards—Rotograph Post Cards, as it happened. The two operators were Germans, most kind but very secretive about their process, and I could gain no information regarding it except what I could see outside the dark room. This part of the process was simple, so far as I could see. A plate-holder was inserted in the camera, the sitter placed in a chair under a skylight and exposure made in the usual manner, and then one of the operators would whisk the plate-holder away to the dark room from which he would presently emerge with the finished product.

Just before these operators left town, I had an opportunity to see how all this mysterious manipulation was accomplished, although I had guessed their method even before I saw it.

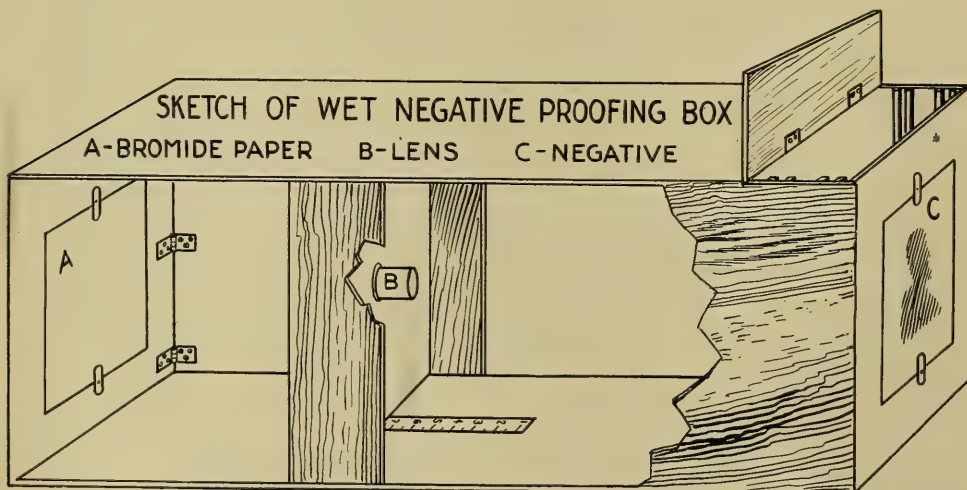
The scheme necessitated the use of a box similar to an enlarging camera. Sketch of similar apparatus is shown herewith. The plate, which, by the way, was a $3\frac{1}{4}$ by $4\frac{1}{4}$ in a 5×7 camera, was taken from the plate-holder and developed, a strong rapid-working metol-hydrochinon developer being used, rinsed, and placed in an almost saturated acid hypo solution. Fixing took but two or three minutes, and then the plate was rinsed again and swabbed off with a tuft of cotton. It was then placed in the box—wet. Before going any further it will be necessary to describe the apparatus.

The box is to be made as shown, the dimensions being about twenty-four inches long, eight inches wide and ten inches high, inside. The negative end of the box is open while the other end holds the sensitive paper and is provided with a door the full size of the opening. At the negative end four cleats are nailed inside the box to form a groove into which an 8×10 kit may be slipped. This kit may have an opening suiting the plate to be used. A kit can be easily made at home, if the expense be an item. Midway of the box, inside of it, a slide should be rigged up provided with a board to hold the lens used for projecting. This lens may be your camera lens, or a cheap single achromatic. A piece of celluloid may be tacked to the bottom of the box marked with numerals to aid in securing the size of picture desired upon the sensitive surface at the other end. Illumination of the negative for projection may be secured by placing the negative end of the box against an opening, which has been provided in a window-frame, or, what is more desirable a pair of condensers mounted in a separate box with an artificial light of some sort behind them may be used. The latter is the method used by the two German operators.

Having placed the wet negative in the kit, a piece of 8x10 ground glass may be placed at the closed end of the box, the door being swung open while the image is focused. When a sharp image is secured, of the size desired, a piece of bromid paper is inserted and the exposure made, the print developed, fixed, and rinsed. The developer and fixing solution are similar to those used for developing the plate—very strong. A hypo eliminator of some kind was used by the operators, the print again rinsed, dried quickly (with the aid of heat if necessary), trimmed and delivered. This would apparently take some time to do, but the operators were so expert that it was all done quicker than I could explain it, and the prints were often delivered in ten or twelve minutes. To facilitate matters, the lens in the projecting box was set at a certain point, and as all plates and resulting images were alike in size there was no need for focusing. In fact, with the negative always in the same place at the end of the box, the sensitive paper at the other extreme end and the lens exactly in the center between the two, the image will always be sharp and the size of the picture the same, that is, natural size of image on negative. If a larger or smaller image be desired provision must be made to move the negative, as well as the lens. This could be done by mounting the kit in a slide similar to the lens slide.

How permanent these pictures were I have no means of knowing as I have not kept those I had taken, but I should judge they were fairly permanent.

The above method would be of doubtful value to the amateur unless he would care to start in this business himself, but inasmuch as the arrangement can be used to make enlargements, and also quick proofs from wet negatives, it is worth looking into. A proof can be made from a wet negative in quicker time than it takes to tell it, and the results are always better than by placing a sheet of wet bromid paper in contact with the wet negative and printing in the frame. I built one of these boxes about a year ago and used it in connection with newspaper photography, in which I was then engaged, and I had them all beaten when it came to turning out fast work, and there was no necessity of using a plate larger than $3\frac{1}{4} \times 4\frac{1}{4}$, whereas my rivals were obliged to use 5x7 cameras to secure the desired results.



On the Selection of Titles

By JOSEPH DAVIS

The most pleasing and least laborious branch of photography is at hand when our pictures are all mounted and ready for titling. Then our finer education is brought into play and we will either detract from the effectiveness of the finished pictures through unsuitable titles, or actually beautify them by pleasing and suggestive names. If we feel that the technical part of the production of the pictures be at an end, that the rest requires little if any thought, we are entirely mistaken; I repeat, the time is now at hand when is brought into play that which



THE LOG CABIN IN WINTER

demonstrates our education, our taste, in the use of proper words. An enormous field is open for not only a generous amount of "faking" but for a display of our originality.

Originality. That touches the keynote of success in many branches of photography. In posing, in composition, through all the after processes, in mounting, framing and titling the resulting pictures, let us try to get away from the hackneyed names, the time-worn titles and our results will amply repay us for the extra thought and trouble. With *genre* pictures we cannot be too careful in selecting the simplest of names, for the beauty of *genre* work is that the picture itself should "tell the story." Where the title does all the "telling," leaving nothing to our perception and imagination, the photographs are simply "photographs" and nothing

more. With some *genre* pictures, the scenes are so true to life, that they require no titles, being just as effective without them. It is pictures of this kind that usually grace the walls of our twentieth century salons.

If the location of our subject be well known, it would be wise, in some cases, to disguise it, as, for instance: Swan Lake, Central Park, may be entitled merely Swan Lake which may be in any place or park, but exactness is not nearly so requisite in the majority of cases. As previously stated, "faking" may often be effectually resorted to. Some of our pictures, even those meant to be sunlight scenes, by under-exposing, under-developing, or by over-printing, often resemble sunsets, moonlight or night pictures, and can be thus labeled. Photographs taken in nearby parks, whether snow scenes or plain landscapes, may be entitled "Winter in the Adirondacks," "In the Haunts of Rip Van Winkle," etc. This misrepre-



"KINGDOMS RISE AND KINGDOMS FALL,
BUT I FALL ON FOREVER"

sentation, however, does not always avail, for some of our amateur friends pounce upon us with the exclamation, "Why that was not taken in the Catskills, was it?" and then they go on to say, "I remember having seen that same view in Central Park." Then we must blushinglly acknowledge our guilt.

Faking in photography, however, is something I do not wish to advocate too strongly to the conscientious worker, and although retouching is not exactly faking, I do not advise amateurs to practice much of that either.

Realizing that I am getting away from my subject, I will return to it by describing a source from which some of our pictorial workers of repute acquire

many of their most effective titles; that is, from literature—from good, old-fashioned literature; farm rhymes, poems, and other forms according to their subject. I once saw a dozen pictures that were taken in the Indian Territory, and mounted on a long card, with a verse from Longfellow's "Hiawatha" as a title for each. The effect was very pleasing, and raised photography from the mere level of picture taking to the ranks of literature.

Leaving literature alone, I will speak of something most important in titling; and that is names that sion. I will give three refer to. Of course either but notice how the impressive than that of the cabin, could be called preferably we will say "ter." Such scenes as the usually named "The extract from a poem, we rise and Kingdoms fall, Another pleasing way is near Jerry's Point," and be titled by some enthusiast," but for the benefit may not appreciate this "Leisure Moments" or Of course, these photographs or works of art



THE YOUNG BOOKWORM

leave a favorable impression made by one is more other. The picture of the "The Log Cabin," but "The Log Cabin in Win-view of the waterfalls are Falls," but, to revise an will title it "Kingdoms but I fall on forever." to say: "The Waterfalls the like. The third would siastic brother as "My Sis- of others who perhaps fact, we will call it either "The Young Bookworm." graphs are not master- by any means; they are

simply shown to better illustrate my meaning with regard to effective titles. Our title decided upon, and our picture mounted, the next step is to place the title on the mount. Some prefer to mark the negatives, thus having the name on the picture itself, but this is an uncertain plan, and is often instrumental in defacing a valuable plate beyond repair. In titling the mount, the best plan is to rule lines with a sharp pointed lead-pencil, according to the size of the desired words. It is advisable to have the writing small; the correct size of the letters being about one eighth of an inch in height. When dark mounts are used, white ink gives most pleasing effects. With light colored mounts, black or blue ink gives the desired results. The field open for artistic and original effects in this direction is large indeed, and accessible to any amateur, advanced or otherwise.

"One-Man Method"

By MILTON WAIDE

The general interest manifested by photographers in the "One-Man Method" of photography, seems to warrant the belief that the following pointers, all of which I practice, may be interesting, and possibly of aid.

Photographers, heretofore inclined to be skeptical, are beginning to believe that there must be more than *theory* in the idea, when it can be successfully proved

under the necessarily trying conditions of a Fifth Avenue New York location.

I have tried the method in a small city, and now, for the past three years in the metropolis, and on a street where prevails the world's highest rentals, and under each condition have found a proportionately successful result. In each it works out just the same. I therefore believe it a fact that any man of good judgment and some energy knowing some such method can today, and in any town or city in the United States, launch a studio on this plan and be certain of success. Because: First, there are two essential elements required in business ventures of today to insure success: *Novelty* and *Merit*. Neither will succeed alone. Novelty without the merit is soon found out. While merit with novelty lacking will obtain only until the new man comes to town with a novelty. But with the novel idea "Different Photography" backed up by merit, patrons will leave the old love for the new, and success is assured.

The expression, "Different Photography," in itself, I have found to be an excellent advertisement. It appeals when explained. In each of my street cases are the words "Different Photography," "Explained in the Studio," and "Ask for Booklet." To the questioner I say, "Different Photography" means just this: In most studios the men who produce your photograph—retouchers, printers, mounters and others, have never seen you. Here, like portrait painter, the one *man* who poses you, who obtains expression and effect that he believes to be your best, with his own hands and brain creates and produces unto completion his ideal. This appeals to the prospective patron. It sounds right. And all you've got to do is to back it all up with meritorious results and you will be talked about and busy. Here it is necessary to say that I realize that in small towns necessity makes men "One-Man" photographers, and in such cases the comparison with other methods cannot be made in the manner warranted by city conditions. But with a perfected system the "One-Man" photographer can produce his present output in one third the time now required and of more uniform and praiseworthy quality, and be able to devote the other two thirds of the time in perfecting ideas to increase his business by judicious advertising, getting out up-to-date samples and numerous other aids to increase his business, necessary at the present day and impossible under present conditions in the "One-Man" studio of the little town.

A little black card with white lettering, to be found in my entrance case, reads: "With his artificial light printing method, portraits may, if desired, be ready for delivery day after ordering. This is only possible with Mr. Waide's method." In a business way, the value of this idea can hardly be estimated. Artificial light printing is surely the coming way. I am as sure of it as I am that it would require a big bonus to turn me back to daylight printing. Work can be, and is, produced that can be hardly told from fine carbon and platinum prints, and if this result can be once obtained, it can be done all the time.

If you start right with the negative, and perfect the right sort of system, you can do it.

An additional street-case card reads: "Flattering in most studios is done by retouching. *Here*, it is accomplished by obtaining a characteristic pose, a complimentary lighting, and an expression produced during natural conversation, and, therefore, void of self-consciousness. This is 'Different Photography.'"

These suggestions to your public, appeal and will bring business.

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX

SAN FRANCISCO, CALIFORNIA, JUNE, 1904

No. 1

The Salon Club of America

Starting, as it did, in the desire of a few enthusiastic workers to bring themselves into closer touch with each other, its growth bids fair to far exceed even the most sanguine expectations of its founders. Its list of members now contains the names of many of the most prominent workers in this country with others constantly asking to be made sharers in the benefits to be derived from such membership. Four portfolios are now on the road containing the work of Mrs. J. E. Bennett, Miss Nellie Coutant, Misses W. and G. Parish, Herbert A. Hess, Carl Bjorncrantz, Walter Zimmerman, Louis Fleckenstein, and other equally prominent workers. It is desired that a Western Division of the Salon Club be formed, and the Editor of CAMERA CRAFT has undertaken the getting out of a like portfolio to be circulated first among those contributing, and then to be exchanged for the current portfolio of the main body of the Club. It is hoped that a sufficient number of those asked to join will avail themselves of the opportunity to come in closer contact with the best workers of the country, which the plan makes possible. Application for membership will be considered by the Committee, which is composed of three members: Curtis Bell, Walter Zimmerman, and Mrs. J. E. Bennett.

The Photo-Secession and the St. Louis Exposition

I wish we could reprint in its entirety an article under this title, and from the pen of Mr. Alfred Stieglitz in a recent issue of *The Amateur Photographer* (British). As a clear and lucid explanation of the course pursued, as a true and comprehensive justification of the position taken, it leaves little to be either demanded or desired of the Photo-Secessionists. That their course was most consistent and their position entirely tenable, there can be no question. Quarrel as we may with the views, the attitude, or the methods of any body of serious-minded workers in any field, we can but applaud them for a steadfastness in such aims and undertakings as they may elect to uphold. It is evident that to abandon for a moment such principles as they have adopted as their articles of faith would be but to sacrifice a portion of the credit that is sure to accrue where so good a cause is championed. To desert the policy for which they have banded themselves together in order to uphold, would be but an acknowledgment of

weakness for which no excuse could be made. The inconsistency of condemning in one instance the same adherence to a principle that has compelled our admiration and our thanks in another and more creditable one, is too apparent to require mention.

Wanted: Western Writers

Why is it, with our own Pacific Coast so creditably represented in fiction, in poesy and in deeper lines of thought expression, that so few writers on photographic subjects have entered the field? In proportion to population, our Western land can claim a larger proportion of camera users than perhaps any other territory. Not only this, but the number who, through the productions of their cameras, have made their names known to their fellow workers is well above the general average. Can we not have the same incentive to pride ourselves upon our photographic writers? CAMERA CRAFT stands ready to assist in every possible way the full exploiting of any suspected talent in this direction. And talent—talent has been said to be but a capacity for hard work. Candidly, I believe, that in this particular field of effort at least, a little talent, a little work and a little help in the right direction are all that is required. I do not wish to say that all can write acceptable matter for publication, but my experience leads me to believe that a small measure of encouragement is all that is required in most cases. Any reader of this publication, and particularly any resident of the Pacific States is invited to submit an article on such a photographic subject as they may feel competent to discuss, and if they will at the same time write me a letter asking for such advice as I can give, I will be only too glad to comply with their request to the extent of my ability. Such parties as I have indicated will understand from this that it is our desire to furnish any and all assistance in our power. Can we do more? *You*, you who should share our desire to produce a publication in every way a credit to us, can certainly do a great deal more than you have done. Will you kindly give us an opportunity to make good our promise in this respect?

First American Photographic Salon at New York

This salon will be held at the Clausen Galleries, 381 Fifth Avenue, December fifth to seventeenth, under the auspices of the Metropolitan Camera Club of New York, and The Salon Club of America. Announcements have recently been mailed to all obtainable names of exhibitors at former salons, and others whose addresses are known to the committee in charge. The jury is composed of artists, well-known artists, men who give their time and effort to matters of art and all work submitted will be examined by them. Prospectuses can be obtained from the Club, 102-104 West 101st Street, New York, or can be secured from this office. While all exhibits other than foreign are supposed to be framed or glazed, CAMERA CRAFT will undertake to forward a shipment from this point to be glazed or framed in New York in accordance with the wishes of individual exhibitors, provided a sufficient number express a desire to co-operate in this manner. It may be possible for us to make some arrangement whereby only accepted pictures need be so framed or glazed. Announcement will be made concerning this matter in a future issue.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Photographic Museums

Mr. Morgenstern writes on the above subject in the *British Journal of Photography* and the story he tells should stimulate us on this side of the Atlantic to obtain a national collection worthy of the work that we are doing. The writer points out how:

"An Englishman, Mr. W. Jerome Harrison, was the first who mentioned that a great many works of Daguerre's art merited a better fate than to perish unknown, and were worthy of being preserved for the profit of the men of our own age and future generations. Mr. Harrison read, therefore, at the Photographic Congress of Chicago, 1893, a paper, in which he exposed the necessity for all nations to create international collections, with the possibility and intention of exchanging photographs with each other. The paper was heard with great enthusiasm by the members of the Congress, who chose an international commission for the study of the question, but nobody heard anything of it afterward, which is usually the case with resolutions at international congresses."

But fortunately for the success of the idea, it was taken up by Leon Vidal, the well-known French authority, and by his efforts the Musée des Photographies Documentaires was founded in Paris, which now possesses a collection of 80,000 photographs and is considered of sufficient importance to be housed by the government. In England Sir Benjamin Stone founded the National Photographic Record Association in 1897, which is chiefly engaged in collecting photographic records of ancient monuments, buildings and documents. It has over 3,000 photographs which are housed in the British Museum. Belgium and Switzerland have similar collections to those of France and Germany, and Austria is now organizing one. As Mr. Morgenstern well remarks:

"Such collections can be of the greatest service to photography in preserving its best and most interesting products for posterity, and also to science, art, and history, by keeping these important documents, which may be useful for scientific studies in the future. An example of the importance of photography in the history of our time, is the instantaneous photographs of an amateur, made at the Buffalo Exhibition, where the scene of the assassination of President McKinley is depicted exactly.

"The Musée des Photographies Documentaires is also an indispensable addition to all public libraries and archives, for these institutions possess no iconographical catalog, and it is impossible to find there any particular illustration contained in a volume without a special catalog, whereas, in the photography archives it will be found immediately. Such an institution is also of the greatest use to editors, printers, and publishers of illustrated journals, who will find there precious materials for their publications."

Surely the time has arrived when something of the same kind ought to be established here. On every side our rapidly advancing civilization is effacing the life and industries of the older inhabitants, aboriginal and Spanish. The time will come when our descendants will regard these things we pass by as commonplace with an interest such as we accord to relics of a distant past.

Surely we might well be as thoughtful of posterity as were the Babylonians of 7,000 years ago who placed their records in the foundation-stones of the Temples for the instruction of those who were to succeed them.

Blank Skies in Thin Negatives

Mr. Henry Bond writes on the above subject in *Photography* and advocates the drawing in of clouds on the negative as against

the use of double printing from a cloud negative. He points out that the most beautiful of all cloud forms, the cirrus, is rarely well reproduced by the lens and yet is easily imitated on a thin negative with the brush. It will of course be obvious that a thin skyey negative is a *sine qua non* for this method of worker, as the artist puts on lights. (Whether it would be possible with the retouching knife to take out dark clouds is not considered.) To realize fully the value of the method the reader should see the examples with which the article is illustrated. Mr. Bond advocates some preliminary study of cloud forms and then describes his *modus operandi* as follows:

"With a fine brush a little of the oil-color is first of all touched upon the glass side of the sky in a random sort of way, yet with some regard for the result one has in mind. These spots of paint may be worked upon and spread about in quite a leisurely way either with the fleshy finger-tip or with a "dabber," made by placing a small plug of cotton wool in a quill, for the paint takes a considerable time to dry hard. The oil-paint should not be "let down." The denser its consistency, the easier it will be found to manipulate, the very small quantity necessary to be used having to be "flatted out" into what appears to be the thinnest film of color when the negative is held against a window, or is seen on a retouching desk.

"If the cirrus and stratus clouds are to be represented it would be well, before going to work, to familiarize one's self with their characteristics, as the thing cannot, of course, be done properly in a haphazard sort of way. But how easily and how pleasurably may we thus take note of our commonest surroundings! What is chiefly to be remembered as characteristic of the "cirrus" is its dappled fleeciness, and its tendency to take on an arrangement or pattern not inaptly compared to the markings seen on the back and sides of a mackerel. The variety of "stratus" oftenest seen in conjunction with "cirrus" is the gauzy markings lying pretty low down in the sky, though obviously at a much greater altitude because the flocculent cirrus is always seen in front of it when not superposed against the actual blue sky.

The Phosphorescence of Photographic Plates

Mr. Walter J. Clarke, writing to *Nature*, says: "Having seen in *Nature* several letters on the above subject, recalls to my mind

some experiments made by me two years ago. I first observed it after developing X-ray plates; and mentioning the matter to Prof. Poynting, of Birmingham, he advised me to pursue the subject.

"I subsequently found that the same phenomena were exhibited with a photographic plate, whether previously exposed to light or not. I observe that your correspondent, Mr. Bloch, says that he 'chanced to empty some spent pyro developer and a dilute solution of alum into the sink of the dark room at the same time, when the whole liquid at once glowed with a brilliant phosphorescence.'

"By 'spent pyro' I presume that he attributes the phosphorescence to the influence of the silver salt of the plate upon the solution.

"May I point out that the phosphorescence is exhibited by the mixed pyro and soda solutions in an ordinary white developing dish, without any contact whatever with any photographic plate or paper, and without adding any other salt, but that the phosphorescence is not so brilliant, and takes a longer time before it can be seen.

"The phosphorescence is distinctly seen by pouring the solution of pyro and soda into the dish, allowing it to remain a few minutes, and pouring it away so that only a few drops are left on the dish.

"I tried to obtain a photograph of an object between the luminous dish and the camera, but without success.

"My friend, Dr. Martin Young, of Birmingham, who is an ophthalmic surgeon, and accustomed to deal with optical phenomena of a delicate nature, being particularly sensitive to the faintest luminosity, in assisting me was able to localize the position of the dishes and even of glass measures containing the solutions in the dark room where no photographic plate had been in contact with the liquid.

"We concluded that the phosphorescence was entirely due to the process of crystallization taking place in a thin layer of liquid."

Rich Brown Tones on Bromids

1. Can I get a rich brown tone in bromid enlargements—similar to that obtained in P.O.P.—by slight gold toning? If so, will you give me formula and full instructions? 2. Will such tones be permanent? 3. Will the density of the original print be increased or reduced? 4. For how long should the print be washed *after* toning? 5. Must the

print be fixed, well washed, and dried before toning?

D. H. C.

1. We are surprised at your failure, which should not have occurred provided the solutions were made up properly. We now give you a different rendering of the formula—a rendering that will enable you to keep the various components in solution and so insure their not losing their properties before use. We need hardly say that the solutions when mixed together will not retain their toning properties. The following method has been used by us in our own work, and we have demonstrated with it before the London societies, and we know it to be effective.

A.—Water	20 c.c.
Ten per cent solution copper sulphate	1 c.c.
Ten per cent solution ammonium carbonate (enough to re-dissolve the precipitate), about	8 c.c.
B.—Ten per cent solution ferric-anid potassium	25 c.c.
Water to	150 c.c.

Add A to B. A short immersion gives purple black. Long immersion gives bright red, tending to carmine. Wash well after toning. 2. We have had prints toned in this way and exposed for some years without any apparent change. 3. We have not found it affect the density at all; but it does slightly redden the high lights, and we have not yet been able to remove this slight tint; it is not, however, detrimental to the appearance. 4. About half an hour is sufficient, but the tone will not be washed out by longer treatment. It must, of course, be well washed after fixing, otherwise stains will result, but it is not necessary to dry the print before toning. If the print be first dried, the toning solution will act with greater rapidity. The prints must not be hardened with alum, or any other substance, before toning.—*English Amateur Photographer.*

Modifications of Gum Printing

In a series of articles in *Apollo*, Herr Reugh Patsch has dealt most exhaustively with gum printing and advocates a modification of his own. It consists in the addition of albumen (egg), which has been used by others, and also of manganese sulphate.

His formula is:

No. 1.—Albumen	12 c.c.
Mucilage of gum (1 and 2) ..	5 c.c.
Moist pigment (see below) ..	3 gm.
No. 2.—Water	100 c.c.
Manganese sulphate	10 gm.
Ammonium bichromate..	10 gm.

For use, mix the above quantity of No. 1 with 15 to 20 c.c. of No. 2. The following two examples are given of mixed pigments for making up the 3 grams:—A. Lamp black, .25 grams; ivory black, .75; bone black, 2. B.—Lamp black, .5; ivory black, 1.5; bone black, 1.

Another modification that is worth looking into is the method of Dr. Lux who by adding an iron salt to the gum mixture increases the detail of the resulting print. The method is as follows:

The paper may be coated with a twelve per cent solution of hard emulsion gelatin (such as Heinrich's), containing some acetic acid and also some iron solution, the liquor ferri sesquichlorati of pharmaceutical lore being recommended. The iron solution is added until the color of the mixture is such that a layer two millimeters thick makes white paper look distinctly yellow, and the pigment is then added as usual. Coating should be done with a wide brush, quickly and evenly, at 112 degrees Fahrenheit. The dry paper when exposed should be developed forthwith, as the carbonic acid in the air will oxidize the reduced iron salt, and so destroy the image if kept. A few minutes' immersion in cold water in the dark room removes the soluble iron salts, and when the wash water is no longer colored the print may be taken into full daylight and developed like a gum print.

Stereoscopy in the Sixteenth Century

The Photo Revue points out that the Lille Museum contains two drawings of Jac. Chimenti da Empoli, who lived between 1554 and 1640, in which a young man is presented in almost the same position as though the one had been made with the right eye and the other with the left. When reproductions of these pictures are viewed in a stereoscope they give the full impression of solid relief. Whether the painter simply wished to fix the different appearance of an object as viewed by each eye, or whether he had in mind the stereoscopic principles enunciated by his contemporary, Leonardo da Vinci, must remain unknown.

With the Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Three-Color Inks

Let your three-color inks alone. Use them as they come from the can, and if one make of ink will not do your job try a set by another maker. But do not try to "mix" inks unless you have plenty of time and want to gain experience in the mixing of tints. And in that case it would be a good idea to first take a few lessons in painting at a good art school. If the three-color process is ever to be practical it must reach the point where the printer has only to use the inks as he finds them. Here is the opinion of Mr. William Kurtz of the Colorotype Company of New York to a publisher who recently went to him for information. In answer to a question Mr. Kurtz produced a paper with samples of the three inks he used. He then said: "To find those inks cost me a house. And it was a New York house at that, worth many thousands of dollars." With this to go by the photo-engraver and printer should realize that the inks must be a fixed quantity. In England many photo-engravers brand their blocks with the name of the inks to be used in printing them. This may look like a form of favoritism but it undoubtedly has a foundation of common sense.

Importance of Albumen Conditions

As a general thing in mixing the sensitizing solutions for line and half-tone work, and also enamel, any egg, except what must be classed as "any old egg," is made to do duty in the way of furnishing albumen. And another thing—albumen is measured in a graduated by bulk instead of by weight as it should be. To say that good work cannot be gotten out under these conditions would be wrong, but better work could be

produced, more surely and satisfactorily if more attention be given to the selection and measuring of albumen. Many a streak of "bad luck" in the operating-room might be traced to bad eggs. It is only a little work to test and properly measure albumen, but it will pay for itself many times over. In the first place be sure the eggs are fresh. Reject any egg that will not sink quickly in a pan of cold water. Then measure your albumen with a scale. Do it accurately. When the formula calls for an ounce, use an ounce exactly. As albumen is slippery stuff to take out of a glass in small quantities the best implement is a small syringe. Put in more than is wanted and then remove the surplus until the scale registers exactly.

The Age of Collodion

Most operators prefer old collodion, holding that it gives harder and clearer negatives. And it does, but it is much slower than new collodion. Why this is so is a question that is often asked. But it is not easy to answer. There are many reasons why old and "ripe" collodion gives more contrasty negatives than when it is new. Here is one reason: Collodion becomes yellow and then a dark amber color with age. This yellow color prevents the faint light, which reaches it in the camera, from penetrating beyond the surface of the film, consequently there is no halation, or fuzziness, due to the diffusion of light in the sensitive film. The developer acts only on the surface of the film, thus giving the clear negative which is a characteristic of old collodion. To prove this is so, add a few grains of carbonate of soda to a dark amber collodion, when it will turn to a light amber in color and give softer negatives. Another reason is that the "old" collodion has lost a certain amount of ether and gives

a thicker film which takes longer for the light to penetrate and consequently does not spread on the glass plate and produce halation. To put less ether in when mixing would not produce the effect of age because it takes so much ether to properly dissolve the chemical.

Matrices Sticking to Half-Tones

Every stereotyper has or has had this trouble. And each one has his own remedy. The trouble is about the most aggravating one in connection with printing half-tone cuts in newspapers. As a general thing it happens on the "last form" when the pressmen are waiting to get started and not in a very good humor. It is generally agreed that on this occasion profanity is absolutely indispensable; some even insist that it is the only real remedy. But here is what one of the best pressmen in New York does and he "never has any trouble." An examination of the cut will show that the trouble is due to one of two causes. Under-cutting of the etching acid, or chemicals on the plate. The former leaves a slight overhang on each dot and when the matrix paper is driven in it crawls under and hangs on. Acid on the plate destroys the matrix paper. But here is what the New York pressman does: As soon as he gets his cut he puts it through the molding machine under the same pressure he uses in making his matrix. This, he claims, beats down the overhang if there be any. Next he washes the cut in ammonia which neutralizes any acid that may remain on it from the etching bath. Then he brushes it well with a mixture of plumbago and French chalk. All this takes only a little time and the results are said to be satisfactory.

Substitute for Ground Glass

Accidents will happen to ground glass and often at a time when a new one cannot be obtained. Here is a good substitute for ground glass that can always be kept on hand and render the process-worker independent in this regard:

Sandarac	90 grains
Mastic	20 grains
Ether	2 ounces
Benzole	$\frac{1}{2}$ to $1\frac{1}{2}$ ounces

The proportion of the benzole added determines the grain of the matt obtained.

Early Three-Color Printing

Many photo-engravers suppose that the three-color process is entirely new. It is new only so far as photography is concerned. In fact three-color prints were made in London in 1730. They were printed from steel or copper mezzotint plates, printed by hand and were very beautiful. And even today to copy one of them the same size would tax any half-tone shop in the country, even though only indifferent results were obtained. The inventor of the original process was T. Ch. Leblond and he formed his company in London about 1730. He had many troubles principally financial, and about 1740 moved to France. Here he had many imitators. Some of the colored copperplate prints of that day, which were sold at a few shillings, are now valued at many hundreds of dollars. In 1730 Leblond published a work entitled "Il-Colorito; or, the Harmony of Coloring of Painting Reduced to Mechanical Practice Under Easy Precepts and Infallible Rules." Leblond maintained that in painting, all visible subjects can be depicted by the aid of three colors, namely, yellow, red and blue, and expressed himself as follows on the subject: "Various mixtures of the three primary colors produce all conceivable tints, and if they are intermixed black is produced." By Leblond's method a separate plate was used for each color, but as three colors did not give depth enough to the shadows he eventually employed a fourth plate. All of which would seem to indicate that there is little new, after all, under the sun.

Screen Distances

One of the most valuable books for the photo-engraver is "The Half-tone Process," by Julius Verfassers, that has recently made its appearance. The following paragraph is one of the most concise things ever written in regard to screen distance and stops, and it will pay every operator to study it carefully:

"It will be seen that the size of the stop and the screen distance are reversible values. It is quite possible to find a correct size of stop for every screen distance, or a correct screen distance for every size of stop. We may use a constant screen distance and vary the size of the stop, or we may use a constant stop aperture and vary the screen distance. The latter is in practice impossible, because a constant stop would not suit

every screen ruling. Further, we must alter the size of stop in order to keep the exposures fairly constant, the exposures varying with the distance of the sensitive plate from the lens. If we only varied the size of the stop we should require a large number of stops varying in size by a small amount, and it would be very difficult to estimate exposures. Hence, it is found best to use few stops, and change the screen distance to suit them. The following rules apply: 1. The screen distance increases as the camera is extended, and decreases as it is closed up. In other words, lenses of short focus necessitate the screen being placed closer; and as the camera is focused in for reductions the screen distance must be proportionately decreased. 2. Coarse screens allow of a larger distance from the screen; so do screens with thick black lines. Fine screens require closer distance; so do screens with thin black lines. 3. The larger the diaphragm opening the closer the screen must be placed to the sensitive plate. With smaller diaphragms it may be farther away. Remember that the greater the screen distance the greater is the loss of light. It is in all cases preferable to use the largest possible aperture, and place the screen close for rendering the high lights, but it will be necessary to give a part of the exposure with the small stop, as a large stop would fill up the high lights before the shadows had time to act. The small stop has a good effect on shadows, concentrating the light on the formation of a sharp and small black dot.

Repairing Broken Graduates

Graduates will get broken, and if they have to be replaced by new ones the photo-engraver will find that it cuts quite an item in the monthly account. But they are easy to repair unless all smashed to pieces.

All process-men have at hand two cements, the best of their kind. One is the india-rubber cement, used in turning negatives; for repairing a bicycle tire, or a rubber overshoe, or putting on a leather patch it is unequalled. The other cement is best adapted for glass, and is the enamel solution. The edges of the glass pieces should be cleaned perfectly. Dilute the enamel solution one half with water. Paint the edges of the glass to be joined with this enamel solution, bring the broken parts together and clamp or tie them tightly. While the parts are thus

firmly pressed together, place the whole in the sunlight for a day or two, when it will be found the glass pieces will have adhered and will stand ordinary washing in water without coming apart.

Enclosed Arc Lamps

From all reports it would seem as though the open-arc lamp is doomed for photo-engravers' use. Eastern houses are making the change to enclosed-arc lamps as fast as possible and the greatest satisfaction is the result. Following is what the manager of one of the largest houses in Chicago has to say on the subject:

"I have just made the change, and the improvement so exceeded my expectations that I make haste to acquaint others of it. I have been using Bogue lamps entirely, each one of which consumed about twenty-five amperes of current. The manufacturers made over the lamps to enclosed-arc ones at an expense of \$25 each, with the result that each lamp now consumes but eight amperes of current and about one pair of carbons a week. For half-tone negative-making I find the copy more evenly illuminated and the time of exposure reduced fifty per cent. For printing on metal the light gives off so little heat, compared with the open-arc ones, that it is possible to bring the printing-frame much nearer the light. Then the arc is a violet-colored one, which reduces the time nearly fifty per cent. A further test of a double-arc printing-lamp with Kloro paper proved the light to be almost the equal of sunlight on a February day. So the saving of the operator's time will soon pay for the change to enclosed-arc lamps."

Purity of Water

Examinations of waters of the Pacific Coast show that most of them contain solid substances that are likely to make trouble for the photo-engraver. For rinsing off the plate after development and before fixing the water should at least be clean. This stage of the process is a very critical one and water cuts a large figure in its perfection. The chemicals are all active, and if the water should contain enough of some substance to produce an effect it is very evident that an element is introduced of which the operator is ignorant. Hence use every precaution to have the water perfectly pure.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

The Focal Length of a Lens

Very often I write a correspondent in reply to some inquiry and mention a certain focal length of lens as entering into the calculation. Four out of five times a letter comes by return mail saying the enquirer does not know what the focal length of his lens really is. It seems a little strange that this ignorance of the focal length of one's lens is so universal when so much depends upon a knowledge of the matter. But how to determine the focal length is what we wish to get at. For all ordinary purposes it is sufficiently accurate to focus the lens on some distant object and then measure the distance between the ground glass and the stop in the lens, if it be of the double type, that is, the ordinary rapid rectilinear or anastigmat. A more exact method is to focus the distant object as before and then marking the run or baseboard of the camera the exact position of the rack carrying the front board and lens, rack the front out farther and focus upon some very near object, say an ordinary foot-rule, again marking the run with the new position of the front board. If we now multiply the distance between the two marks we have made on the run by the length of the object last focused (the foot-rule in this case), and divide the result by the length of the image secured on the ground glass (the image of the foot-rule when focused), the quotient will be the focal length of the lens employed.

Wasting Part of the Plate

I was looking over a collection of negatives the other evening and came upon a set that had a strip of clear glass about three quarters of an inch wide along one side—the long or five-inch side. Furthermore, this strip had a ragged or deckle edge that was quite in keeping with the present fad of hand-

made paper effects. Asking for an explanation of this peculiarity I learned that my friend had been presented with an album that a four by five print would not fit to good advantage, being too nearly square for the pages which were originally intended for five by seven prints. He wanted to make a set of prints for this album, and in order to make no mistake in composing the view he pasted a sheet of paper across the inside of the camera back in such a way as to cut off a strip of the image on the ground glass. This strip of paper happened to be the side of a letter sheet, yellow in shade and with the natural edge. When he came to print from these negatives he placed one of his regular four by five mats over the negative and printed as usual. Trimmed, the prints show a white border around three sides with the bottom or long side relieved by a pretty deckle edge strip of gray a trifle wider than the narrow white border on the other three sides. Not only this, but my friend discovered that the more oblong form was better suited to the boundary lines of a picture space than the more nearly square shape given by the full size of the plate.

The Point of Interest

A correspondent in West Virginia sent me a print a few weeks ago and asked for a criticism. I complied with his request as best I could and incidentally mentioned that the lines of the composition all led away from the point of interest. Well, they did. He has just sent me another one in which he says he has corrected the faults of the previous effort, particularly as regards the point of interest. To him this point of interest is his companion afield whom he invariably poses near the center of his picture. This figure is no more the point of interest than any one of a dozen tree trunks of about the same size. This

person is perhaps a little more assertive if wrongly placed than would be one of the tree trunks, but the point of interest is determined, nine times out of ten, by the location of the most striking contrast of light and dark. True, this contrast may be, and often is, located in another part of the composition entirely apart from the logical point of interest or that feature supplying the motif of the picture. This is where the trouble comes in with many of our productions. An ordinary landscape appeals to us and is photographed. We have a pretty roadway curving away into the distance. No deep shadows are brought into proximity with a high light at any point in the roadway. Away to one end of the print a bit of unclouded sky that comes out white paper in the print, is sharply contrasted with a mass of foliage in shade. The result is that this point claims the eye so persistently that the logical point of interest, the roadway, suffers and the picture is to just that extent faulty. On the other hand, this contrasting of light and shade should not be too evidently brought into play in emphasizing the point deemed most important. I have a negative of my own making that is perfect in these two points. The highest light and deepest dark contrast at exactly the right place, a little below and to the left of the center. The point of interest is right there. Every line in the composition leads directly to this point. The composition is a failure. It looks as if everything in the picture had been dragged toward that spot and buttoned there with a large black and white button that would hold things in place if it pulled the print off the mount. We must have recourse to a little art in our compositions but the art should never discover itself too plainly.

Making a Reputation

Most of us amateurs are rather looked down upon by our friends when it comes to serious work. They pose for us with a patronizing air and insist on having things just as they want them, often implying by actions, if not by words, that our own ideas on the subject are hardly worth consideration. They ask us to make them a few prints with an air that almost says: I suppose I must show my appreciation in some way and really this is about the best I can do. Even this would not be so bad were it not for the serious handicap this mental attitude

of our friends places upon our work. They fail to find any merit in even our accidental good picture. At best "it is very good work for an amateur." Knowing all this from sad experience, great was my surprise to find the acquaintances of a certain amateur friend all lauding his ability most highly. As I could find no evidence of anything out of the ordinary in his work I was interested in learning how he had managed to secure such a reputation. It was all as easy as one could wish. It seems that he had early in his career desired to reproduce some sketches made by an artist friend. Of course the results were failures. He persisted, tried this method and that plan, bought "Copying Methods" of the *Photo-Miniature* series and gave the matter a deal of time, thought and experiment. The result was that he could copy a lead-pencil sketch or a type-written letter and secure a good black and white print. He soon found an opportunity to demonstrate his proficiency in this line by turning out work that a professional had assured one of his friends could not be accomplished. Aside from the credit to be gained by being able to do a good piece of copying, the insight that is obtained concerning the possibilities of our tools is well worth the effort involved in mastering the matter. Again, lettering and even quite creditable drawing is within the power of many persons if the scale be generous. A large sheet of bristol-board and some drawing ink opens great possibilities in the way of invitations, menu cards, dance programs and the like to the amateur capable of producing a good negative from the finished effort of the artist. It was in this line of work that my amateur friend had perhaps most widely advertised his ability as a photographer.

Those Photographic Departments

As some of my readers will remember, I have an occasional fling at the so-called Photographic Departments in the lay press. The amount of valuable misinformation that they generally contain is only equaled by the bulk of silly twaddle that is served in connection. It is with a good deal of satisfaction that I am able to comment upon one such department that is a brilliant exception to the rule. *The Mobile Register* contains each Sunday a department headed "Lens and Camera" that is full of matter that would be a credit to the best

photographic magazine published. While the modesty of the editor is responsible for the fact that no name is given, I believe it is but fair to prospective readers to state that no less an authority than our old friend, Richard Hines, Jr., of that City is responsible for this saving example of what such a department should really contain. Candidly, an editor of such a department can exercise a more "free lance" style than is permissible in the regular publications, or rather, we can look upon his recommendations of particular lines without fearing that perhaps the space covered by the firm in the advertising pages has something to do with the case.

How to Apply Plate Backing

I drove out to a suburban town last Saturday evening to spend the night with an amateur friend, the two of us going on to a promising field the next morning. My visit was unexpected and plate-holders were to be filled. This is the way the gentleman went about the job. He had had made some tin clips about three inches long, just wide enough to slip over the edges of two plates placed face to face and about deep enough to grip perhaps one eighth of an inch. He said he got the idea from those used on the Kodoid plates. You know your plates are packed in pairs, face to face. He simply removed a pair from the box, slipped a clip on two sides and then smeared on the backing to his heart's content and without the least fear of touching the emulsion with his fingers or allowing it to come in contact with anything that might do damage. He didn't even have to be careful about the backing finding its way where not wanted. To tell the truth, this individual threw these pairs of plates around as if they were so many pieces of shingles that he was trying a new stain upon.

A Substitute for Matt Varnish

I was in an amateur's den the other day and found him printing on Velox paper from negatives that, as I supposed, had been given a coating of matt varnish. Here was just the man I had wanted to find for some time. We are constantly reading the advice to dodge our negatives by flowing the glass side with this varnish. Did you ever try it? I have, and made a most complete failure of it.

Well, my friend asked me to wait a few minutes and he would show me how it was done. A jar of paste and the ordinary bristle brush was all he used. The coating dried in a few seconds, was easily removed where not wanted and permitted of the application of powdered lead from a pencil point rubbed on where needed with a paper stump. The next time you have to print from one of those negatives we all have in our collections, the kind that are good and bad in spots, try the application of a thin coating of paste on the glass side.

Temperature in Development

One of the hardest things for the beginner to realize is the importance of the part that the temperature of his solutions plays in their action upon the plate. How often do they find their favorite developer failing to work as expected, and yet blaming everything but the real cause for their disappointment. Just try the experiment of developing duplicate exposures in the same developer but using it well warmed in one case and quite cold in the other and note the result, or rather, notice the different behavior of the plate in the two developers.

Just as Easy

Did you ever hear a disciple of the "Sharp All Over" School start in to ridicule a picture that was a little different from his own conception of what a photograph should be? He does not use a half dozen sentences before he tells you how easy it all is to produce such work; very often going a little further and intimating that all this "artistic" quality which the offending picture is supposed to contain is nothing more nor less than a lack of skill in manipulation on the part of the photographer. When you get tired of listening to his talk, and you certainly will because he never knows when to stop and his ignorance precludes any possibility of an argument; ask him if he will kindly demonstrate just how easy the production of such a picture can be made. Although he has explained that wrong focusing, under-exposure and wrong developing are the causes of the effect produced in the picture under discussion, a trial will prove that the securing of a like picture is not so easy as he seems to think. There is no question but that the author of the picture so voluminously condemned has committed many, to the sharp-all-over

man, sins of omission but at the same time there has been maintained a delicate balance between the various operations that require even more skill than that necessary in the production of a technically perfect negative. Understand me, I have no fault to find with the man who devotes his time and camera to the production of what have been called "the regular thing." On the contrary I have often voiced my belief that the production of such work can be made more satisfying to a no small proportion of the camera owners of the land than the pursuit of "art qualities" for which they have neither perception nor inclination. What I do object to is the too ready tendency on the part of some workers to belittle the value of work turned out by their brothers of the lens whose aims are at variance with their own.

Why A Dark Room?

A friend of mine recently moved to Florida and wrote me that he would send me some prints as soon as he could fix up a dark room. Another correspondent complains that he is compelled to use a small closet with such inconvenience that he dreads making an exposure knowing that the development of the plates will cost such discomfiture. Still another of my friends came to me within the week and explained that repairs in his dark room made it impossible for him to do anything until the work was finished. All this sounds very strange when one has learned to feel that a dark room is hardly worth the room it takes up. I have seen very few that I felt were worth the trouble it must cost to keep them clean and fresh. For over a year I made from twelve to twenty-four eight by ten negatives every week. It was just four blocks from my rooms to the Camera Club rooms where perfectly appointed dark rooms were at my disposal. One can easily learn to develop plates without making any more trouble than if they were writing letters. Any room with windows protected by ordinary roller-curtains is safe enough for all purposes, once darkness has arrived. An ordinary table will easily hold all that is required in the way of utensils. An upright fixing-bath, a bucket to receive used developer, a convenient pitcher of water and a sheet of oil-cloth to protect the table-top is all that is required that might be found necessary in a fully equipped dark room. Why a regular

dark room if these four simple accessories are all that the lack of one implies? I am sure I cannot give any good reason why.

A Catalog Worth Securing

As I have said before, I do not like to use this department to advertise any line of goods, but when a catalog like the one just gotten out by the Century Camera Company comes along I have to advise my readers to secure one. There are over fifty good reproductions of photographs, photographs that are full of suggestions in trimming, mounting and grouping; saying nothing about the variety of subjects and lessons in composition which they contain. Flashlights, night scenes, stereo work, pinhole photography, and, in fact, every possible subject seems to be covered by one or more good examples. Quite a number of the best are printed with a die effect on cream-tinted paper, single-page illustrations that are entirely separate from the text. I have never used a Century Camera; we poor photographic writers have to be content with the old boxes we bought years ago. If I could only find one offered second-hand in some bargain list I would attach it at once, but they do not seem to find their way into such lists. And I do not wonder, if they are half as fine instruments as my friends claim they are, the fellow who buys one must be wedded to photography for life.

Criticism

I belong to one of these Postal Camera Clubs in which the members criticize each others work. Some of these criticisms are ponderous and others are not. Some are worthless and others are of the greatest value. As a rule, the most word consuming and imposing dictum contains the least practical teachings, although there is the fellow who simply endorses each print as "fine," "good," and the like. There was one print that was criticized in a manner that I will long remember, and I imagine the other members will do the same. It said: "Stream in the center of the print; boat in the center of the stream; man in the center of the boat. The man who made that a snap-shot must have won the cigars. He certainly rang the bell." Another fellow had a print in which was portrayed a dog of sorrowful mien with his mouth slightly ajar.

Notes and Comment

The list of subjects in *The Photo-Miniature* really seem to be inexhaustible. No. 59, Combination Printing, is one of the best and should prove itself invaluable to workers in every branch of photography. The author of the monograph, A. Horsley Hinton, is really an artist in printing from a series of negatives, and his results and experience have a world-wide reputation. A copy will be sent postpaid for 25 cents. Address Tennant & Ward, Room 106, 287 Fourth Avenue, New York.

Hirsch & Kaiser announce their 1904 catalog of cameras and photographic supplies. The new book is easily the largest and most complete price list ever distributed by this firm, and the photographers that are familiar with their catalogs of former years will understand that this means "something good." One hundred pages printed on heavy coated paper and illustrated with over two hundred half-tones, including a large assortment of especially fine pictures of the newest things in folders and card mounts. Copies are free, and will be sent upon request. Just drop a postal to Hirsch & Kaiser, 7 Kearny Street, San Francisco.

Notes from the Illinois College of Photography

Mr. Otto Hillig, student of '99 has returned to the College for review work and to take up a course in photo-engraving, which he will use in connection with souvenir work, etc., at his studio at Liberty, New York.

Prof. F. E. Strickland has taken a position on the faculty commencing April 1st, and will devote his services to a portion of the Retouching Department.

Two of our Japanese students, Mr. T. Mitono and Mr. K. Iijima have secured places at the World's Fair at St. Louis; the former in the Japanese tea-garden on the Midway, and the latter in the Japanese Department. They will return to the college and finish their courses after the Fair.

We recently received a visit from the Sunday Editor of one of the largest daily newspapers in the country, seeking twelve

photo-engravers for the Engraving Department of his paper. We are constantly receiving calls for workmen in this line and are quite unable to supply the demand.

Preparations have been made to receive large numbers of our friends and former students who will stop off at the College on their way to the World's Fair, and everybody who may choose to pay us a visit will be made cordially welcome.

A trade-getter for the professional studio comes to us from Mr. W. I. Scandlin of Brooklyn, N. Y., in the shape of a very modest but strongly written and attractive booklet. It is called "Modern Photographic Portraiture, with Suggestions of Interest and Value to the Sitter." The first and last pages of the text are devoted to a very strong argument urging the importance and necessity of good photography, while cleverly interwoven between them is a series of hints and suggestions concerning colors and fabrics that photograph well, time for sitting and a statement to the effect that good photographs may be made in cloudy as well as in pleasant weather, and some pertinent suggestions regarding child portraiture. The booklet is unillustrated and is fitted to the use of any studio doing good work. The name, address and telephone number, of any studio ordering, is printed upon the outside cover, but otherwise the booklet, which is copyrighted, is the same for all buyers. We understand that the price of this booklet is \$15.00 for a single thousand, special prices quoted on larger or smaller editions. This booklet should meet the requirements of almost every photographic studio on the Coast. It bears every evidence of being a winner for the studio putting it out. Mr. Scandlin's name is alone enough to endorse it.

Open Letter

San Francisco, Cal.

To the Editor of CAMERA CRAFT, Dear Sir: Complaints are constantly reaching me from all parts of the country from photographers who have been duped by a man or men, claiming to be agents for Wilson's Photographic

Magazine. I shall esteem the courtesy highly, and the fraternity will be in your debt, if you will give space in your columns for the statement that Wilson's Photographic Magazine employs no agents whatever outside the recognized stock dealers. Any one else, representing himself to be an authorized agent, may be branded at once as an impostor and fraud.

Yours very truly,

EDWARD L. WILSON.

Some remarkable enlargements are to be seen in many of the photographic stores throughout the country. They are issued by Taylor, Taylor & Hobson to show the possibilities of a Cooke anastigmat, and though measuring something like 16×20 , they are direct from 5×7 negatives. One of them shows three race-horses going at full speed within only a few feet of the camera and at right angles to the lens axis. A small half-tone of this subject is shown in our advertising pages this month. The pictures are by J. C. Hemment of New York, and are worth examining by those interested in high speed photography.

The Elysian Camera Club, Hoboken, New Jersey, began a competition January 1, 1903, offering a cup to the member exhibiting the finest marine subject during the year, each member to be permitted to exhibit but one view. The cup has been awarded to William Peterson, who made the winning negative with a Bausch & Lomb Plastigmat Lens.

The Bausch & Lomb Optical Company, Rochester, New York, would be glad to have the addresses of all photographers who win prizes with negatives made with their lenses, and to arrange with them for copies of the prize-winning prints.

Professor Cook's Book

The fifth edition of Professor Cook's book, "More Light On Negative-Making" has just come to hand.

This edition deals with "Mixture and Compounding Chemicals," and is gotten up in faultless style, making it one of the most valuable additions to photographic literature that has been made in years. Professor Cook had an advance sale of the book that covered every copy before it was off the press, and is considering another edition. L. F. Hammer, founder and president of the

Hammer Dry Plate Co.; M. A. Seed, founder and vice-president of the M. A. Seed Dry Plate Co.; Harry M. Fell, American Aristotype Co., and all of the leading men in photographic circles have highly commended the work. The books are in the New York State Library and the Boston Library, besides many other places.

For several years Professor Cook served as professional demonstrator to the Eastman Kodak Co. He is now serving in the fourth year as principal of the department of negative-making, at the Illinois College of Photography; instructing in and supervising the making of more than three hundred negatives daily. This department is the largest and best equipped of any laboratory or developing room devoted exclusively to photography in the world. Professor Cook is the instigator of university methods as applied to photographic technical training and is a regular contributor to photographic literature.

The Bissell College of Photo-engraving sends a copy of an elaborate catalog. If the illustrations are samples of the half-tone work executed in the school, they speak well for the instruction and the faculty back of it. This is again a "pioneer" effort on the part of Mr. L. H. Bissell who is at the head of the now well-known Illinois College of Photography, which he started as the original institution of its kind. Mr. Bissell is awake to the need of a practical school of engraving and with the complete equipment described in his catalog, has certainly met the demand most adequately and can "make good" to all who take a course of instruction under his management. A beautiful booklet, describing the college and its method of instruction, will be sent upon the receipt of two two-cent stamps.

The Bausch & Lomb Optical Company are sending out copies of their new portrait lens' catalog, in which they list a series of photographic objectives intended for the professional photographer. They call special attention to the series of f-2.2. portrait lenses, the most rapid portrait lenses of same focal length in existence, also to the new series of f-5 lenses, and to the new lens mount which is fully described in the front portion of the catalog. You will no doubt call to mind that portrait lenses have been mounted in exactly the same kind of mountings that

were used with the earliest lenses, and that practically no attempt has been made to increase their effectiveness through improvement of the mount. Bausch & Lomb have in this new mount introduced three very great conveniences to the photographer.

They also call attention to the Portrait Unar, an objective which we believe is destined to prove an ideal lens for the professional photographer, as it not only provides him with an anastigmatic objective of the very highest quality, but by the use of the diffusing system, which is supplied with this lens, gives him full control of the lens, so that he can obtain not only that sharpness which is characteristic of the anastigmat, but all the softness and diffusion which it is possible to obtain with any portrait objective. If you are interested in portrait lenses, write to Bausch & Lomb, Rochester, New York; mention CAMERA CRAFT and ask them to mail you a copy of this new catalog.

"Artistic Retouching, Modeling, Etc.," is the title of a new book by Miss Clara Weisman, and published by H. A. Hyatt, St. Louis, Missouri. It is refreshing to pick up a book which has not followed the many beaten paths, and in "Artistic Retouching," Miss Weisman has handled this important subject in an able and interesting manner. The book is not a repetition of subject-matter as in other works of its kind. It is written with a definite aim and purpose and for photographers who desire to improve their work by a study of the underlying principles. The book is bound in cloth, and sent prepaid for \$2.50.

The Monthly Review, published by the Photographers' Association of California, has just been received. This bright four-pager contains many interesting notes as to the doings of the coast professionals, a complete report of the annual meeting of the Association, and many news items.

It will also be the purpose of this little journal to publish briefly such photographic news likely to prove of interest to the members, as well as occasional articles by well-known authorities upon important topics.

A "WANT" column will also be a feature, wherein employers and employees, members of the Association, can make known their requirements, gratis. The need of such a

department for the giving out of information of this nature has been long felt, and photographers are invited to avail themselves of the free use of this column when occasion offers.

Other departments will be added from time to time when found advisable and space permits. Contributions to these columns will be thankfully received and made use of when found available.

Address all communications either to the President, O. H. Boyé, 1312 Market Street, or the Secretary, D. F. Mullender, 121 Post Street, San Francisco.

The management and manufacturing of the Seneca Camera Company has been changed since January 1st. Mr. F. K. Townsend, who for several years has had charge of the Chicago branch of The Rochester Optical & Camera Company, is now manager, and Mr. Joseph Goddard, who was formerly the designer and manufacturer of the Poco Cameras, now has charge of the manufacturing and designing of the Seneca Camera.

One of the latest discoveries is the Quta Camera which produces a picture complete in frame in less than a minute, requiring no gallery or dark room. Further particulars sent upon application to the Quta Camera Company, 20 West 15th Street, New York City.

The good qualities of the Hammer Dry Plate have never been more in evidence than they are at the present time. Enlarged facilities for their manufacture and the most perfect, modern machinery, coupled with a rigid inspection of every batch of plates manufactured, has resulted in a product of uniformly good quality throughout. Hammer Plates are made in such variety of speeds and working quality as to fit them to every requirement of modern photography, either in the field or studio.

The announcements of this firm in our advertising pages are full of interest from month to month and are serving to introduce the Hammer Plates to many who have not known them before. This introduction is in most cases all that is necessary; the plates do the rest and the demands upon the capacity of the factories are also steadily increasing.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

114 Geary Street, San Francisco

Entered at the Post Office in San Francisco as second-class mail matter

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WANT AND EXCHANGE DEPARTMENT

If you have anything to sell or to exchange try this department. Somewhere among the thousands of CAMERA CRAFT readers there are sure to be several who will be glad to correspond with you. In many cases CAMERA CRAFT can guarantee the reliability of the advertiser and will do so upon request. Otherwise the magazine assumes no responsibility. One insertion free to all seeking employment. Fifteen cents a line, eight lines \$1. Cash must accompany advertisement.

Two hundred and fifty-six unmounted views of the Philippines; size 5x7; no two alike; packed in case ready to mail, \$3. J. D. Givins, photographer, 1776 Union St., San Francisco, Cal.

For Sale—Fine ground floor studio, good business; cabinets, \$8; requires A No. 1 workman to handle. Price, \$3,000. Don't bother unless you have the price. C. A. Krauch, 512 South Hill street, Los Angeles.

Amateurs—Send for Bernham's Border Masks. New designs, 4x5 size now ready. Price, 25 cents. Milbern Mfr. Co., 334 Dearborn street, Chicago.

We are looking for a first-class platinum printer, a young man that understands some of the other branches of the business, such as enlarging, printing albumen or solio, dark-room work, etc., preferred. Address Rice & Perkins, care of CAMERA CRAFT.

For Sale—A first-class photographic studio. Fine location. A bargain for somebody. Address the only Broadway Ground Floor Studio, 442½ South Broadway, Los Angeles, California.

Wanted—A Photographic Studio to rent, with privilege of purchase, in a section where a good business can be done. Full particulars in first letter. Address York State, care CAMERA CRAFT.

Wanted—Amateurs having cameras (not kodaks), 4x5, or any size larger, can earn \$5.00 per week by taking pictures for us at home. Send stamp for particulars. Oval Portrait Company, Caxton Building, Chicago.

For Sale—A new studio, fully equipped and in first-class location. Located in San Francisco, draws high-class trade. Ill health makes it necessary for me to accept a position in the South. Will make easy terms to right party. Address California, care of CAMERA CRAFT, San Francisco.

For Sale—6½ x 8½ Century Grand special camera with 6½ x 8½ Bausch & Lomb plattinat lens and volute shutter, three double plate holders and carrying case for same; Folmer & Schwing Crown No. 2 tripod. All nearly new and have had very little use. Price \$100. A. H. Cowan, Pacific Grove, California.

CAMERA CRAFT



Price 10 Cents

San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CAL.



A. CHLOE BROWN
P. YANKEE BROWN

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX

SAN FRANCISCO, CALIFORNIA, JULY, 1904

No. 2

Why Some Photos Are Failures Beginners' Troubles

By WILLIAM S. RICE

It is not the intention of the writer of this article to ridicule, or to "show up," the glaring faults of the beginner, but to aid him to overcome such failures as are used to illustrate this little informal talk. All of us have been guilty of having committed these same common errors, way back in the early stages of our careers, so that what I shall offer in the way of suggestions will be intended mainly for the guidance of the novice, who has "just begun to take pictures," and who needs elementary instruction in order to avoid the most common mistakes incident to the first stages of this interesting study.

I do not wish to convey to the reader that these few criticisms cover all the errors of beginners, but to draw the attention of the novice to a method of handling photography in such a way that he will incur fewer disappointments and obtain more satisfactory results.

In order to illustrate some of the stumbling-blocks in the way to success, in a practical manner, I have invited a number of my friends (many of them pupils of the public schools), to send, or bring to me, such work of theirs as they deemed unsatisfactory, promising them in return to tell them why their photos are unsatisfactory, and how to avoid making the same mistakes in future.

My offer was most heartily responded to, and the results of the criticisms I am pleased to present, in order that others may read and profit thereby. Here are some of them:

I.—CAUSES OF PINHOLES—UNTRUE COLOR VALUES—STIFF POSING

"I have been having such distressing luck with my wild-flower negatives taken during last summer's vacation," said Madge B., who is an enthusiastic pupil in the High School Botany Class, "some of my choicest negatives are just full of little round holes, and what is most provoking, they are always to be found in a particularly interesting part of the subject. The photo of 'Mountain Laurel,' which I enclose (No. 1), has also a black streak across it. Now what on earth could have caused these defects? I am just as careful as I can be."

The "little round holes," Madge, which print black in your pictures are known as "pinholes," not that pins have anything to do with them, but mean little particles of dust have a sly way of getting into plate-holders; sometimes they are caused by air bubbles in the developer. Do you ever dust your plates or



No. 1. Pinholes



No. 2. Should have used color sensitive plate



No. 3. Stiff pose, face in shade

No. 4. Inappropriate background

plate-holders with a soft, flat camel's-hair brush; before loading? No? Never thought of it, perhaps. You will find an extra brush of the same kind useful in spreading the developer evenly over the plate. That will prevent air bubbles forming and will remove any dust which may have gotten there by accident. The black streak was caused by a scratch, probably from your finger-nails. This is an accident that frequently occurs while developing during hot weather, when the gelatin coating of the plates becomes very soft and tender. You should have used ice in your developer, and a hardening solution in your hypo bath.

"Why did my picture of a 'Field of Poppies' (No. 2), turn out to be such a paradox?" impertinently asks another ambitious naturalist. "The poppies in nature looked much lighter and brighter against the grass, but judge of my surprise when I made a print from the negative, the flowers were dark and the grass much lighter in tone."

The reason why your poppies are so untrue to nature is because you did not reckon on their color, which is orange; and you doubtless did not know that the ordinary photographic plate is not so sensitive to orange, red and yellow, as it is to blue, gray and violet. You should have used a color sensitive plate (isochromatic), which would have rendered the orange shade or value of the flowers and the green of the grass in a more truthful manner.

"While visiting my friends in the country," said Mabelle R., "I tried to get a picture of Thomas in the cabbage patch, but somehow the picture doesn't satisfy me. I wish I knew what's wrong about it." (No. 3.)

I think, Mabelle, if you had snapped Thomas while in the act of hoeing the cabbages, you would have had a more pleasing subject. He looks too stiff and posy, and is looking right at you. Don't you think he would have made a better picture if taken unawares, or in the act of hoeing?

II.—UNSUITABLE BACKGROUNDS—DOUBLE EXPOSURE—OBJECTS OUT OF FOCUS

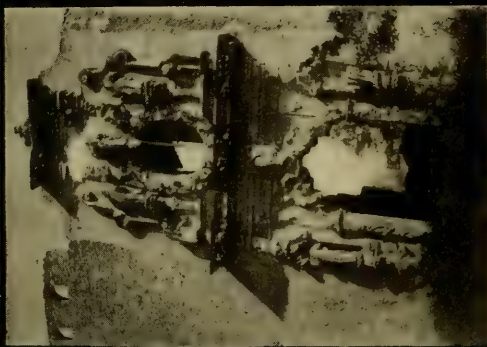
"Perplexed Amateur" writes: "I am so much handicapped when it comes to making home portraits of friends, or members of our family, in regard to suitable backgrounds. I send you a portrait of Aunt Sue, which I took recently against the shady side of our house, this being the best background I could find to place behind my subject. Somehow I don't like it, but can't tell just what is the matter, the background distresses me." (No. 4.)

Yes, my friend, the weatherboards are exceedingly distressing. Why not use a plain gray shawl, or blanket, as a background, tacking it against the wall; or, for a few cents you could buy a yard or two of heavy, gray wrapping-paper, or canton flannel, or, better still, some ingrain paper such as paper-hangers use. Certainly any of these would be quite an improvement on the horizontal lines of the weatherboards. For subjects clad in a light costume, why not use a simple, natural background, such as is afforded by an ivy-covered wall, or hedge, or shrubbery?

In the other picture of the dog which you submit, the background is not very interesting, but more consistent, perhaps, than in your portrait; but the picture is spoiled by the cast shadows of the operator and the onlooker. You could by trimming the picture a circular form improve the subject very much, and get rid of those shadows entirely. This would reduce the picture somewhat, but the objectionable parts would be eliminated.



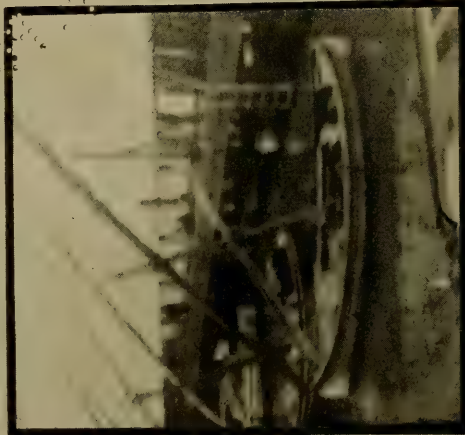
No. 5. Distortion



No. 6. A bad habit of leaning



No. 8. Blank sky



No. 7. Printed from the wrong side

"I also send you another curious freak," writes the same person, "a 'Portrait of a Lady' (No. 9) with a snake coiled about her body. I remember making an exposure of a coiled gopher-snake, but it never dawned upon me that I had exposed the same plate, by mistake, upon the young lady. How horrible was the sight, on developing, to find the coils of a huge serpent wound about the body of the innocent girl."

The amateur who has never before experienced this ludicrous and oftentimes startling effect of his carelessness, will perhaps not appreciate what I am saying. You have lost, not only one plate, but two equally good subjects; your time and labor, as well as your plates, are wasted in such cases. Yet this is not an uncommon occurrence, even among professionals. To avoid it, always turn the



No. 9. "LADY AND THE SERPENT"

black side of the slide handle outward after making the exposure. Should you use a roll of film, turn the spool immediately after taking a picture. Make it a habit to do this on all occasions and you will escape the disappointing experiences illustrated in the "Lady and the Serpent."

Arthur Greene wishes to know why his photo of a horse (No. 5) is so out of proportion.

Well, I'll tell you, Arthur, you went too close to the hind legs of the horse with your camera; in other words, the front part of the horse's body was much farther from the camera than the rear part, which is slightly out of focus.

Better take a profile view of the horse the next time, or place the camera farther from the subject when you make another exposure. If your camera had a lens with a longer focus this fault would be less noticeable, if not disappear entirely.

III.—RESULTS OF NOT HOLDING THE CAMERA LEVEL—Too MUCH SKY— REVERSING THE NEGATIVES

"Why do my buildings all have a bad habit of leaning?" queries John Doan.

Because, John, you have gotten into the bad habit of not holding your camera level while focusing. If you have no "finder" to your camera with a "level," a simple remedy can be resorted to by taking a lead pencil and ruling a true vertical and a true horizontal line on the ground glass.

"Anxious Amateur" writes: "I took a picture of the Italian Fish Wharf (No. 7) a few years ago, and obtained a good, sharp negative; yesterday, when I made several prints from it, they had an indistinct, foggy, uncertain look about them—they have puzzled me a good deal."

Don't worry, my anxious friend, just see next time that your negative is not put into the frame wrong side out. You doubtless forgot that the dull film side of the negative is the side which should face the printing-paper.

"In deciding on a composition, say for instance a landscape, should there be equal parts of sky and land?" asks Clarence B.

No, that is against the rules of good composition. Suppose, for example, in your picture of the "Sailboat" (No. 8) in which the sky is a large, blank, uninteresting space, while the water and foliage are of far more interest, you trim off about half of the sky, almost down to the tip of the sail.

I must conclude my article by remarking in general to the beginner. Do not feel disheartened if your work, at first, fails to equal the work of experienced masters of the art. Persevere, labor, study nature, and above all things follow implicitly the directions given by the manufacturer for manipulating your plates, films, developer and printing-paper.



NYPHAEA ODORATA

By Mrs. M. S. Gaines



PRIMITIVE WATER-CART
SWISS MOUNTAINS



THE MONK'S ADVICE
ST. MALO, FRANCE

Street Scenes and How to Get Them

By WENDELL G. CORTHELL

The camerist who has always been accustomed to use his tripod and study his subject on the ground glass shrinks from the quick work required in a crowd, or before the rapidly changing street scene.



THE LETTER-BOX—BRITTANY

It is there now but in a moment has gone forever. As riding a bicycle is very easy after you know how and unconsciously use your knowledge without fear,

so capturing street scenes with a camera becomes very easy, and is assuredly very fascinating after a few days' experience.

The writer has devoted months to the hunt for good things in the streets of other countries where life is largely on the street and where good subjects are more plentiful than in our own colder climate. Among the foreign population of all our larger cities is a field ever ready for the photographer.

An American before the camera stiffens up at once and becomes self-conscious, but a Latin European does not care and often makes a good subject even when he knows you are aiming at him. Still it is always well to take the game unawares. This is easily done. Wander about till you find a good-thing, estimate the distance and the exposure needed while your camera is in the case. Turn around with your back to the subject and while apparently looking at some other scene, take out your camera, open it, set the focus on the distance you have decided upon, set the



READING THE LATEST—BRUGES

speed and opening of diaphragm, and while holding it away from the subject, turn about to the scene again and see if all is right there. Bring the camera around, catch the subject in the finder quickly and snap the shutter. It takes much less time than it appears in reading about it. Do not go about with your camera open or in front of you. It calls attention to your occupation. Do it on the sly, for the value of a subject is in its unconsciousness.

Out of two hundred or more such scenes taken by the writer recently in Europe, in not more than ten instances did the people suspect what was coming.

Always turn away from the subject to wind up the film. Another subject may present itself at once and the longer you can keep yourself out of view the better. Rarely if ever allow yourself to snap any one who is conscious of what you are doing. It is generally better to walk away at once even if you come again. You will need all your wits about you. The light, the exposure, the background, the distance and the focus will need to be thought out quickly as well as the best position. Do not study the subject too long. If you do it may melt away. Better



THE IRISH MILKMAID—TRALEE



RAINY DAY IN PORT—BRITTANY

snap some poor things than lose a good one; when in doubt, snap. You may secure a prize and can only lose a film. When you find a very good subject take several pictures of it, vary the view point and even take duplicates to allow for damage in development.

With a good anastigmat lens, wide open, almost any street scene can be taken even on the dark side of a narrow street.

By all means take a folding camera and one not larger than 4x5. One larger than that will often be left at home or at the hotel while a smaller one would be always at hand.

One can hardly over-expose on the street, or rather one rarely does. The writer's practice is to estimate on the exposure required for the next few hours



ON THE RAMPARTS—MONT ST. MICHEL

before he leaves his hotel. As his verbal memory is poor he jots down on a slip of paper what would be normally correct for each hour, then he uses his judgment, with the memorandum as a basis. He uses exposure tables but gets his lesson before starting out. After a few weeks it gets to be second nature to know how much exposure to give under the varying conditions of street life.

Many of the hotels abroad have dark rooms free to guests. Of course the kodak developing machine is everywhere obtainable. Films can be purchased in any town.

The writer has spent several years in wandering about foreign countries but his last trip of six months, in which he took 500 pictures, is more real and fresh to him than any other. This because he secured such a record. There is no teacher of observation like the use of the camera.

Notes on the Anastigmat Lenses

By HARRY L. SHEPHERD

Jena glass, introduced by Drs. Abbe and Schott in 1885, made possible the modern anastigmat lens.

In this article I hope, in a concise way, to give the general differences of the modern lenses, thus giving to the prospective buyer some aid in the choice of an anastigmat for his special needs.

The advantages of the anastigmat consist in their greater rapidity (i. e., they work at a large opening); fine definition at a large aperture; flat field over a wide angle; freedom from astigmatism. You will find these terms explained at length in any book treating on lenses.

Their benefits are chiefly seen in photographing rapidly-moving objects and in making snapshots under trying circumstances—poor light—when it would be impossible to get anything with an ordinary lens.

As to a choice of maker. This is a very open question, but there are certain qualities in all lenses that appeal to different people.

A few points:

(1) *Rapidity.* Rapidity sacrifices depth of focus, though some makers make false claims as to great depth of focus at full aperture. In lenses of the same rapidity but of different focal length, the short focus lens will have greater depth of focus.

(2) *Separability.* When the separate combinations can be used as single lenses at a comparatively large opening, usually about $F/12$, we get, in the case of the symmetrical anastigmat, two lenses in one, and in the case of the convertible, three lenses in one, which is a great advantage over a lens which must be used intact.

(3) *Focal length.* It is best not to use a lens of focal length less than the diagonal of the plate; but again, in confined quarters, a short focus lens becomes a necessity. And now a short description of the lenses of the different makers.

The Cooke Lens: A light, beautifully made lens. Greater simplicity than most makes, being composed of only three glasses. Speed, $F/6.5$. The combinations are not separable, the lens must be used intact.

The Collinear: A symmetrical doublet. Each combination composed of three glasses cemented together. The back combination of Series III, $F/6.8$ and $F/7.7$, used as a single lens, must be well stopped down, $F/16$ at least. Series II, speed $F/5.6$ in the smaller sizes and $F/6.3$ in the larger sizes, are adapted more particularly for hand-cameras. The combinations should not be used separately.

Ross Homocentric: A comparatively new lens, being introduced only a little over a year ago. The Homocentric is symmetrical. The single combinations may be employed as long focus landscape lenses, giving excellent results on the same size plates as the complete combination, when used with moderate-sized stops. Series B, $F/5.6$, and Series C, $F/6.3$, are adapted for any work requiring quick exposures.

Dallmeyer's Stigmatic: Series II, speed $F/6$, is named a universal lens. The front and back combinations of these lenses have respectively an equivalent focal length of one and one-half and two times that of the entire lens and may be used separately, thus giving a choice of three different foci.

Turner-Reich: This lens is fully corrected for astigmatism, has a flat field and works at $F/7.5$. Series III is symmetrical, and the separate combinations can be used at $F/15$. Series II has back and front combinations of dissimilar focal lengths, which is a good feature in all-round work.

Verastigmat: By the same firm as the Turner-Reich, is a convertible lens like the Turner-Reich Series II, but has a speed of $F/6.8$.

Plastigmat: The two combinations are similar, each composed of four lenses. The focal lengths of the various sizes are longer than has been customary heretofore, and correspond in a measure with what I mentioned in regard to the choice of focal length. The lens is symmetrical, speed $F/6.8$, and the single combinations may be used separately at a speed of about $F/12.5$.

Goerz: The Goerz double anastigmat, Series III, $F/6.8$. The lens is symmetrical, and the single combinations may be used separately. The focal length of this series is less than I would care to use, for example, in the lens for a 4x5 plate, the focal length is only 6 inches. The firm of Goerz have lately produced two new lenses, viz: Goerz double anastigmat, type B, Series 1B, $F/4.5$ to $F/5.5$, and type B, Series 1C, $F/6.3$. These lenses are only for special cases. For advantages of speed some of the properties which have made the Series III take a place in the first rank have been sacrificed. In fact this new type is neither intended nor capable of replacing the Series III lenses, but should only be selected where extreme rapidity is the principal consideration.

Zeiss: Series VIIA is the most generally used of the Zeiss series. It is composed of two lenses from Series VII (which in themselves are single anastigmats, speed $F/12.5$, and highly corrected) of the same or different focal lengths united in an adaptable tube making a doublet working at $F/6.3$ to $F/7.7$, according to its focal length.

The Planar, Series IA, $F/3.6$ to $F/4.5$, the Unar, Series 1B, $F/4.5$, $F/5.6$ to $F/6.3$, the Tessar, Series 2B, $F/6.3$, are all special lenses. Of them the Tessar is the most highly corrected. In the others good qualities are sacrificed to speed.

When an amateur decides to purchase an anastigmat his troubles are really only commencing, if he go about the purchase of one in an intelligent manner so that when he buys he knows what he really has.

In price they all "come high," so don't, for the sake of a few dollars, buy one because it is cheap. Buy through a reliable dealer and not at a bargain-house, or you will likely pay dearly for an inferior article mounted in a "lovely brass tube." As to speed, with a focal plane shutter $F/6.8$ to $F/7.7$ is quite fast enough. $F/7.7$ requires only one third to one quarter as much more time as $F/6.8$. It is best to sacrifice speed slightly, if by so doing you obtain separability and flatness of field, not to mention a gain in depth of focus. Nearly all anastigmats will cover, with small stops, say $F/16$ to $F/64$ plates, two sizes larger than those listed at full opening, which is a gain in interior work, if you have a large camera, as it really gives you a wide-angle lens.

Unless you have some one to "help you out" in the purchase of an anastigmat you had best study from the maker's catalogs such matters as separability, focal length, etc., before you invest your money.

To those who think good work is only accomplished with an expensive lens, I can only say it is NOT all in the lens, but in the man who knows how to use the lens, if it cost ten cents or a hundred dollars.

Clouds in Photography

By JOSEPH DAVIS

Scientifically speaking, we say clouds are divided into four great classes, i. e., cumulus, cirrus, stratus and nimbus. Of course in cloud formations one or more of the above kinds will be found together, but I shall treat of them separately.

The cumulus variety can best be described by naming it the summer cloud; we can then picture large, bulky, fleecy and fluffy masses floating slowly below the heavens and doing so much to screen the rays of the hot sun. Under this species we find the "mackerel sky," clouds which resemble the skin of that member of the finny tribe.

Then comes cirrus which we find to be the highest cloud of any beneath the heavens. They are the frail, fernlike, feathery sort and are usually termed frost clouds.

Like a gigantic rock composed of many different strata is the sky when curtained by the stratus or layer clouds. And it is these clouds which, when the sun is taking its last look at Mother Earth, tingeing their very edges, aid in forming the grandest of sunsets.

The last, though probably best known is the nimbus, or heavy dark, threatening rain cloud. Although they form lovely storm effects, requiring no after treatment to bring them out properly, many amateurs have learned, from experience to look upon them with distrust when out in the field.

Without a ray screen and orthochromatic plate, the sky is occasionally over-exposed in order that the rest of the view may be correctly timed. Then in developing we carry the image just so far, taking care not to have the negative too thin, thus leaving the sky, which came up first in developing, so dense as to print pure white in the resulting prints. This is a disagreeable feature, to overcome which, several methods have been devised.

Needless to say, advanced amateurs use specially made cloud negatives which they print in conjunction with their cloudless ones. This method however, requires skilful handling and considerable experience, for it must be borne in mind that clouds must "agree" with the picture into which they are introduced in three respects: As regards size, natural effect (as shadows on the water, reflections, etc.), and particularly in regard to atmosphere. If we print a cold, dreary winter cloud in a summer landscape the result will be ridiculous and we will get chills and fevers alternately when viewing it.

This printing in of clouds from a second negative is conducive to another false rendition of nature, namely, the picturing of soft and delicate cloud effects in combination with a strong and heavy landscape. The falsity of the effect is even more displeasing to the cultivated eye than it is false to nature. Another fault is the printing of clouds from a negative of entirely different quality to that from which the landscape is secured. An under-timed negative of a landscape that has been forced in development until the print assumes the "soot-and-white-wash" character, is illy fitted for combining with a cloud negative of a thin and fully exposed character. No skill in printing will make up for the lack of harmony in the two negatives.



Then there are other methods by which advanced amateurs rid their pictures of the horrid white skies. We have the plan of shading the landscape portion, letting the sky print sufficiently, but this is too uncertain a method to be practicable. Carbon workers and users of the glycerin process however never have much trouble in subduing their prominent skies by the skilful methods peculiar to that class of work.

I will now describe the simplest and most satisfactory plan, first enumerating the requisites and then their application. In sixteen ounces of water dissolve one ounce of red prussiate of potassium which must be bottled and kept from the light as much as possible. Then make a hypo solution of the strength of about one ounce of hypo to twelve ounces of water, to be put in a separate bottle. These two solutions, a tray, running water and several tufts of absorbent cotton are all that are necessary.

Into a tray containing four ounces of the hypo solution place a teaspoonful or more of the reducing agent. If after a trial this is found to be too weak add more reducer, but if too strong dilute more from the stock bottle of hypo. This is known as Farmer's reducer. There are, however, several other kinds on the market which are claimed to be better, but as Farmer's has fulfilled my expectations and given results to my entire satisfaction I see no reason for experimenting with another kind.

Now as to the method of procedure: take a tuft of the absorbent cotton and soak in the solution, and holding the plate with the thumb, fore and middle fingers wipe the dense section, being careful that the fluid does not run unnecessarily over the other portion of the negative. It should preferably run off the side. When reducing the sky of a negative hold the plate upside down and work toward the lower edges, letting the reducer flow off in that direction. Rubbing the edges of the film has a tendency to soften it and wear it off so care must be exercised. Provided the negative is not too thin, every once in a while rub the entire surface of the film with the soaked cotton or place it in the reducer tray for a second or so to insure a more even reduction. It is hardly necessary to add, watch the reduction intently so that it does not go too far. A very good plan for avoiding this, is to place a mirror, somewhat larger than the plate, so that the light strikes it, and while working hold the negative toward the same. Of course it is essential every once in a while to let the running water cover the entire plate in order that the reduction may be confined to the dense sections only.

This method can also be applied when reducing excessive high lights, but a smaller strip of absorbent cotton must be used. When the reduction has proceeded far enough, wash the plate in running water for about forty minutes to remove all traces of the hypo. Then dry, print, and note the difference between the resulting picture and the one obtained from the undoctored negative.

It is one thing to make a statement but another to prove correct what is said. With this in view I respectfully submit to CAMERA CRAFT readers the two accompanying illustrations entitled "The First Frost of Winter." The first is a print of the undoctored negative, and the second is a recent print after reducing the intense sky by the method above described,—before and after, so to speak.

In closing let me urge all camera enthusiasts, especially those who have not tried it, to give "local reduction" a trial. A little patience, then the experience derived from actual practice, will give results as far as clouds are concerned, that amply repay us for our trouble.



COURSE IT'S A BARLOW
by MRS. W. W. PEARCE

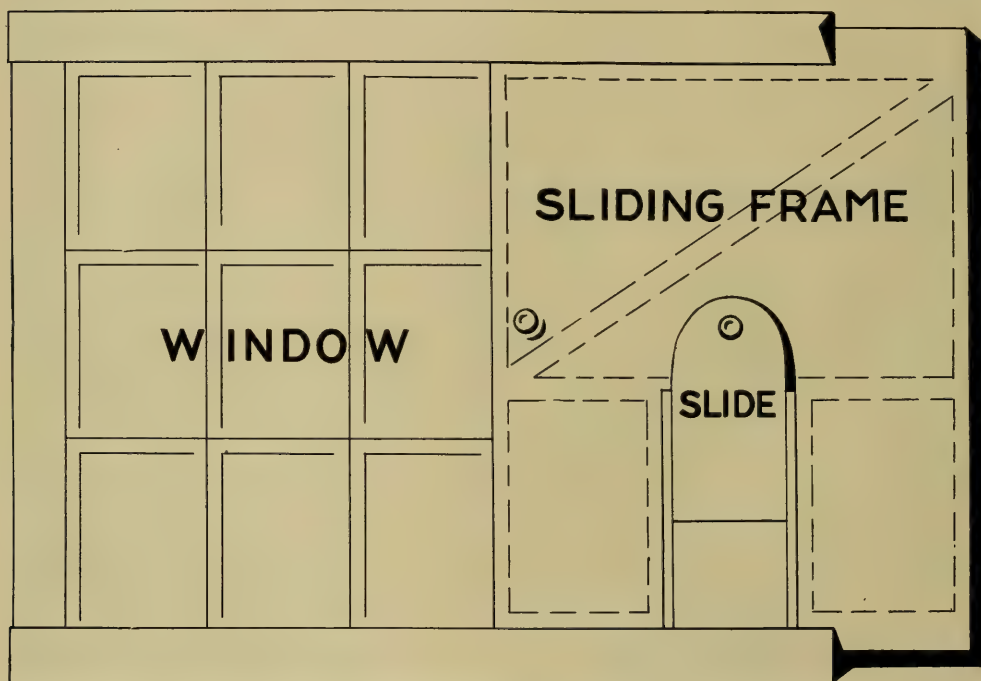


GIRLS AIN'T GOOD FOR MUCH
by MRS. W. W. PEARCE

The Amateur's Work-Room

By C. H. CLAUDY

A great many writers, myself among the number, have tried to tell our brother craftsmen how to build a dark-room. We give our ideas, tell how we would do it if we had unlimited money and time, and all too often fall far short of conveying the instruction we wish to make plain,—how you, the reader, can proceed to build yourself the best dark-room with the facilities at your disposal and with the minimum amount of expense. I might have written, “with the minimum amount of expense and trouble,” but it may as well be written now as later, that he who will not take trouble, and a good deal of it, to make his dark-room what he wants



THE MOVABLE SCREEN WINDOW

it, had better give it up altogether, or pay a good price to some one else to do it for him.

In attempting to give some hints as to the most convenient way to arrange the work-room, I am going to tell, not what I would do under certain circumstances, but what has been done in a certain individual case. The work-room and dark-room I am going to describe, is that of a worker somewhat well known to the amateur fraternity, who kindly allowed me to take the accompanying photographs if I would agree not to publish his name. Nor is it necessary. What I want to tell, and what you want to know about, is the way in which this model shop was made, not who made it. But, lest you give too much credit to the owner and maker, and not enough to me, its historian, I want to go on record as claiming for my

own some, at least, of the ideas embodied, and of which there are duplicates in my own photographic sanctum.

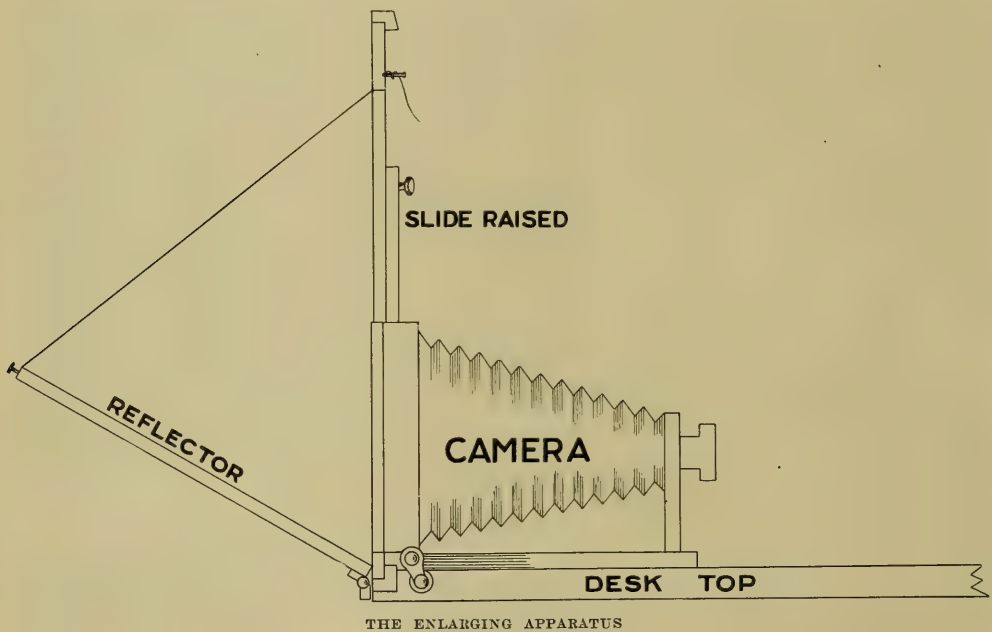
To begin, turn your attention to the dark-room light, seen in two positions in the two photographs. In the first place, it is located over the sink, and developing is done on a grating. All the slops go into the sink, where they belong, and from which locality they can be washed away with no more work than is required to turn on the water-tap. The light is set in a window of the room, which has been blocked up. It is formed of a tin cracker-box (bought at a grocery store), in the bottom of which is fastened a gas-burner, fed by a rubber tube connected with the gas-jet. This tube can be seen running along the shelf to the left of the sink



SHOWING THE CRACKER-BOX LAMP

and connecting with an independent connection, as the gas-fitter calls it, branching from the gas-bracket. The light is formed of two panes of glass, 8x10, the one nearest the flame a deep yellow, the outer one a deep ruby. This ruby glass is in a frame, hinged at the top, and swings up and hooks, when the yellow glass alone is wanted for bromid prints or lantern-slide plates. It is in this position in the first picture, and the gas-flame behind is clearly seen. In the second picture, the ruby glass is dropped into position, and shows a cardboard screen which keeps the light from the eyes of the operator. The whole thing, ruby and yellow glass and their two frames, slides in guides to the right, to allow the gas to be lit. It is a home-made contrivance and cost, including tin box, tin chimney, wire, gaspipe, burner and wood, less than one dollar, and is far more serviceable than any ten-dollar lamp on the market.

Now the sink and water piping. The sink is large, four feet long and two wide, and was the most expensive single article in the room, but has more than paid for itself several times over in the comfort obtained from it. It is fitted with an overflow an inch from the top, so that it can be filled with water and used as a washing-tank for large prints should occasion require it. The grating is removable, simply hooking to the further edge of the sink and resting on the outer edge. Besides the spigot, with its rubber tube, there is an independent connection, also with a rubber tube, which is used to connect with a washing-box, or to obtain water in a graduate or tray when the other supply is in use for something else. The plumbing, like all the rest of the work in constructing the facilities, was done by the owner, with the assistance of a comrade once or twice, when two hands were inadequate, as in setting the sink.



The gas system is as simple as it is convenient. A long twelve-foot tube runs from the gas-bracket (attached to another independent connection) to the left-hand end of the work-bench, where it ends in a low, movable gas-jet, with its own stopcock. This is the light used for printing gas-light and bromid papers. Being movable it can be carried over to the sink to furnish illumination for toning processes or to the top of the desk-bench, shown in the second illustration. Still another tube, with independent connection of its own, runs through a hole in the bench and connects with a small gas-stove, used impartially to furnish heat for the room in winter, hot water, or to dissolve refractory chemicals. If you will closely scrutinize the bunch of tubes at the gas-bracket (and providing the engraver has not reduced the original 8x10 print too much), you will see that each independent connection is provided with a short wooden handle, and you will also notice that the bench gas-jet and the auxiliary water connection is similarly equipped. These are simply pieces of wood, fastened to the stopcock by means of screws passing through holes bored for the purpose. But they prevent confusion in affording

something bigger to take hold of than the ordinary stopcock and allow a much nicer regulation of the gas flow.

Realizing that no work-room ever had too much shelving, the builder made his plans to have shelves in every possible and some impossible places. The result is he has plenty of room for everything, and keeps everything where it belongs. Taking the shelves from the extreme left of the first illustration we see two sets of negatives, orderly in arrangement, each set with its record book on top handy for reference. Then comes a bunch of tin boxes of paper, and above some scales and odds and ends. The top shelf over the sink contains empty bottles waiting for the new solution which is always turning up, and also holds packages and bottles of spare chemicals. The solutions most in use—ortol, soda, M-Q, pyro and



PLENTY OF SHELVING

saturated hypo—are directly over the light within easy reach, when they are wanted. The small shelves to the right of the sink, in the second picture, and over the desk-bench are for small quantities of chemicals, such as persulphate, bromid of potash, iron peroxid, etc.

The graduates and funnels are all racked upside down, so that they will easily drain and are handy to the water and to the place of development. The shelf continued on the plane of the sink contains a fixing-box, a fixing-tray and two washing-boxes for different size plates. Under the sink is seen a piece of family furniture, impressed into service for keeping odds and ends.

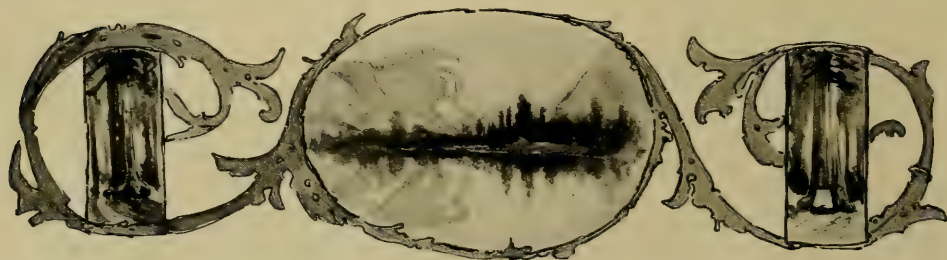
Directly in front of the window is the desk-bench, the drawers of which contain prints, albums, mounts, hundreds of sheets of mounting-paper, lenses, etc. The top of this desk, like all the rest of the available working space, is covered with white oilcloth, cheap quality, which cleans readily and serves the double purpose of neatness and making visible otherwise unseen objects in the dim light

of the ruby glass. The window itself is provided with a movable screen, sliding in guides at the top and bottom, and covered with black paper, two thicknesses. This can be drawn in an instant and effectually shuts out all daylight. Some such provision is an absolute necessity when the work-room, mounting-room, dark-room and store-room are combined in one. Daylight must be used so often for printing and other things, and it is too inconvenient to wait until night for development. I am sorry to say that you will have to content yourself with a diagram of this arrangement, because no photograph could be secured without a flashlight, and that was prohibited on account of the dust it would make, and feared for the pinholes it causes.

In the bottom center of this dark slide is a hole, covered with a little slide of its own. This hole is so arranged that an 8x10 camera, backed up against it, joins tightly on to it. A screen covered with white oilcloth is arranged outside of the window, and the whole makes an enlarging apparatus which can be assembled in less than a minute and put away in the same time, leaving the room as it was before. The diagram will make this clear.

Now for ways and means. The builder possessed a saw, a hammer, a screwdriver, plenty of nails, a two-foot rule, a brace and bits, a pipe-wrench and some common sense. He first planned his dark-room. Then he "unplanned" it and planned it over again. This was kept up for a couple of weeks until he was convinced he had the best arrangement it was possible to make in the space at his command. The lumber was then bought at a planing mill and all the work of putting up shelves, making benches, erecting the sink, plumbing, gas appliances, etc., was done in the evenings of ten days, and he tells me that he looks back to those ten evenings of strenuous and sweaty toil as one of the brightest spots in a sedentary life. It was work, hard work, and when things didn't go right (for he is no carpenter by trade), he often got a little discouraged, but he had a crying need of a good work-room, a knowledge that he could make it if he would and the result is he has made it, and takes more pleasure out of it than he would in a much more elaborate outfit made by outside help.

There is no reason why any one with a spare room and need of a dark-room, should not do the same. Plan it carefully first, and then plan it again. Don't try to do things too well or spend too much time on unimportant details, but see that your arrangement is the most convenient possible, and you will have, for yourself, a place in which you will discover joys in photography you never knew existed. I often work in this room, and I know.





PORTRAIT OF MISS A.
by WENDELL G. CORTHELL

ACROSS COUNTRY TO CATARACT GULCH

BY E. N. SEWELL



To the lover of nature, to the person to whom the "call of the wild" is irresistible, Marin County, on the north shore of the Bay of San Francisco, that garden spot of California, presents the most delightful claims. It is a country of hills which while not of great height are wild and precipitous out of all proportion; of meadows and mesas in which the eye is in season delighted with the most brilliant colors known to nature; of barren and rough ocean barriers; of sandy beaches where most delightful surf-bathing may be indulged in; of beautiful forests of redwood; of streams flowing down through narrow gorges or through groves of alder-trees whose graceful tracery against the sky is a never-ending wonder. It is a country where no matter what one's inclinations are, they may be indulged to the utmost and this too at a minimum of time and expense, for all these delights lie within an extreme distance of twenty-five miles from San Francisco and may be reached within an hour's ride by water and rail followed by short walks.

The writer of this article is an enthusiastic member of the "Grand and Loyal Legion of Trampers," and for years has sought on every available occasion to remove the corrosion of office confinement by getting out into the country, away from everything to remind him of the daily struggle for bread and butter. At such times Marin County has almost invariably been chosen, and first and last every nook and corner have been explored. Every point has been climbed, every ridge followed to its end, every gulch and ravine ascended and descended, and every stream followed from its very beginning to its outlet. But most frequently visited of all places, owing to its overpowering fascination, is that acme of all that is beautiful and wonderful in this delightful Marin County—Cataract Gulch. If you have not been there go right away,—go next Sunday. I will tell how to get there:

Take an early boat—the 7:45—by the Sausalito Ferry at the foot of Market Street—purchasing tickets to either Ross or Fairfax and take the Bolinas Road toward the ocean; any one will show you the road. It makes no difference where you leave the railroad, the roads from both places join after a little distance and then you cannot miss it. But take the Irishman's advice—if you are going to ride, don't go at all, but walk. You can hire a rig to take you as far as Liberty's, or farther on the road, but don't do it. Walk and get the good of it. "Get right next" to nature. From Fairfax follow the road straight but if you leave the train at Ross you may make a cut-off by ascending the Water Company's road (the first grade) past the water cooler and on through the dairy farm known as the "Bon Tempe Rancho." Here is where you have an acute attack of photography.



LAGUNITAS CREEK, BEYOND LIBERTY'S

This is a picture country and you will find streams, old oak-trees, cows, farm-houses and things all mixed up in such delightful profusion that if you don't fix a limit you will expose all your plates or films and have none left for the gulch, to say nothing of the beautiful road scenes to which you are coming. "Bon Tempe Rancho" is surely a corner out of paradise, but it is soon to be no more. The Water Company which infests those parts knows a good thing and has made it its own to turn it into a lake. This cut-off forms the most delightful part of the walk to me, and at the "Bon Tempe" you may again take the Bolinas Road or follow a trail leading down the left side of the Lagunitas Creek to a point opposite or beyond Liberty's and then regain the road.

The Lagunitas Creek has its source on the north slope of Mt. Tamalpais in Lake Lagunitas, which is passed a little to the left on the cut-off referred to



ON THE BOLINAS ROAD

and flows out through the "Bon Tempe Rancho" and follows the road past Liberty's to a point some two miles beyond, where it is joined by the stream flowing out of Cataract Gulch. This stream should be regarded as the main stream of Lagunitas Creek, as it undoubtedly carries the most water, but the Lake Lagunitas branch has the official designation through being better known. Liberty's Resort has always been favorably known by those frequenting the road and one may here be served with a good meal but—I nearly forgot—don't rely on wayside refreshment, take a small lunch with you, it will be noontime when you get to the gulch and a lunch consisting of a few sandwiches and hard-boiled eggs

washed down with the ice-cold stream water outclasses the most sumptuous meal on earth.

After passing Liberty's, which is about four miles from Fairfax and five, by the road, from Ross, the road is to be followed to a point where the creek is crossed by a bridge. Here the road turns to the left and enters the gulch which it ascends with the new stream on the right hand until a second bridge is reached and then begins to climb the ridge, but you want no more wagon road. Scramble down the bank and you are in Cataract Gulch. Now you must be prepared to climb, for from the bridge to the top of the gulch in the meadow I don't think there is, outside of a few pools, a single yard of level stream. As for the path, it is more often straight up than any other way. It winds up the creek, which it crosses more times than can be counted, and leads you along and across the trunks of fallen redwood



HERE THE ROAD TURNS



"THE BANKS ARE HEAVILY
WOODED, THE SKY IS ALMOST
ENTIRELY SHUT OUT, AND
THERE ARE MANY PLACES THE
SUN NEVER REACHES."

trees (*Sequoia sempervirens*) and over boulders and up and down until, as the darky said, "you are black in the face."

Photographing in the gulch is something that many dozen plates may be wasted on without much result, but if you use a slow plate—say "Seed 26X"—and expose for 10 to 20 seconds with stop 32 (U. S.) and then develop "soft" you should get good pictures. Don't try to focus—it's too dark. Stop down to 32 and adjust focus by scale to 25, or 50 feet as occasion may demand. The picture on page 75 was a ten-second exposure of a scene, only a few yards above the bridge, which is commonly spoken of as the First Pool. Other views were exposed from 8 to 15 seconds—none less—double these exposures would do no harm. The water does not suffer from these exposures, which are necessary to get some detail in the dark corners and in the moss-covered rocks, on the



BON TEMPE RANCHO

contrary the result is remarkably true to nature. The effect is of "wet water" as one of our friends said.

No one has seen Cataract Gulch until he has been to the "Big Pool" which is well up in the air on a shelf of rock which requires quite a scramble to reach, but the exercise will do you good and you will wonder and thank Heaven that such places exist. I cannot describe it except to say that the water comes tumbling down out of a paradise of rocks and trees away up there at an angle of 45 degrees as far as you can see. There is no sky, it probably is there, but it forms no part of any scene in Cataract Gulch. After circling around for a few seconds in the pool which is possibly 25 feet across the stream drops down beneath your feet in the same manner that it came. And the noise! In the winter season and in spring you must talk by signs though in summer it is not so bad, but there is still enough water to make a good show and plenty of noise. On above, by a still harder climb, you reach the first waterfall (see picture on page 77), which is possibly

thirty feet high and in a deep cut in the rock. And so it goes—cataract, cascade, waterfall, pool, without end. The heights are not great of course, but when you find something doing every few feet or so for two or three miles it amounts to something. However the beauty of it all is past description, it is a beauty that appeals to the best in one's nature—there is exhilaration and ecstasy in it.

The gulch is extremely narrow throughout, and as the banks are heavily wooded, the sky is almost entirely shut out and there are many places the sun never



CATARACT GULCH

reaches. Below the bridge, and for a little way above, the stream is well lined with alder-trees, whose white and mottled trunks and (in the winter time) leafless branches possess a rare and remarkable beauty, while the banks and rocks that continually block the stream are padded inches deep with a rich green moss out of which grow in wild profusion all the wild ferns known to the State except the delicate "five finger" maidenhair-fern which used to be abundant. It is gone now, every root has been taken up and carried out and potted at home or more likely

forgotten or thrown away. It is a strange thing to me that many people seem to appreciate the beauties of nature only to such an extent that they wish to destroy them by uprooting and removing all they can, or else they visit a spot of exquisite beauty only to leave it so littered up with lunch-baskets, newspapers, sardine-cans and beer-bottles as to make it resemble their own back yards at home.

Higher up the gulch the alders are left behind and there is an interminable jumble of redwoods, laurel, tan-bark oak and madrone; the undergrowth being made up of every old thing—hazel and huckleberry predominating. In the gulch proper there are very few flowers, for there is not sufficient light and air for them, but columbine, oxalis and trillium are occasionally met with.

Having reached the Big Pool, or first waterfall, you may turn back and reach the station on the way home by six o'clock, and you will have had a day's outing that will live in your memory. But if you are a good mountain climber you will stay with it and "go the limit" emerging finally at about two or three o'clock into the meadows through which the upper reaches of the stream find their way before plunging into the gulch. Here the eye is rested for a while on the green of sunlit meadows and beautiful beds of flowers. Still following the stream for about a half hour the source—Rock Spring—is reached, from which point you may easily reach the Mountain Railroad at West Point or drop down by any one of the many trails into Mill Valley.

Spring or fall seasons is the time to take this trip, for then there is more water in the stream, everything is clean and green and beautiful, and you seem to be more a part of nature. Earlier in the season the leafless trees add their fascination but the flowers are not out then.

In the winter the roads are muddy of course, but there is never any mud in the gulch itself. In the summer the dust of the roads and heat are features which detract, but after you are there you forget them.



MARKET DAY

BY WENDELL G. CORTELL

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX

SAN FRANCISCO, CALIFORNIA, JULY, 1904

No. 2

Making Comparisons

From time to time we are in receipt of letters of a most complimentary nature drawing comparisons between the typographical appearance of CAMERA CRAFT and other publications. While such expressions of approval on our policy to spare no expense in the production of the magazine are most gratifying, we wish to call the attention of CAMERA CRAFT admirers to another feature which seems to escape the observation of many of their number. This was touched upon by a correspondent whose letter lies before me. He says: "I take several other photographic publications but in none of them do I find such a strict adherence to the rule 'original matter only' as in your excellent magazine. I believe you have used one extract from *Photo-Miniature*, and that is entirely excusable on account of its being a very timely topic, during my two years' term as a subscriber. On the other hand, I find many of the others containing a great portion of their matter credited to other publications; often over one half of the magazine being so made up. One in particular contains in the current issue but two articles not credited and one of these is evidently from the trade circular of a manufacturer. It seems strange that such methods do not result in the withdrawal of the second-class mail privileges from such publications. When I find the same article copied in several of the magazines reaching me each month I am glad to turn to the pages of CAMERA CRAFT, assured that I can begin an article without finding as I proceed that I have seen it elsewhere." This extract from my correspondent's letter covers the ground. CAMERA CRAFT has, on a few occasions, published simultaneously with *The Photogram* of London, exceptionally good articles, but these have, in every instance depended entirely upon the illustrations which were furnished us only, thus insuring the entire impossibility of their being published by any other magazine. Furthermore, we have paid for such articles our full regular rate for original contributions, thus absolving ourselves entirely from all suspicion of wishing to save in the cost of material. We do not wish to in the least belittle the value of matter used in our foreign magazines of the craft but the major portion of their most valuable matter, like that secured by us, is published with illustrations, prohibiting its being reprinted by our "esteemed contemporaries."

An Outing; A Demonstration

The California Camera Club gave a most enjoyable outing to Willits during the holidays about Decoration Day. Over fifty of the members enjoyed the hospitality of the genial host at the Willits Hotel, making trips through the heavily timbered lumber country between there and Sherwood. A large number of fine negatives and the memory of a most enjoyable outing, resulted. It is hoped to call another outing to leave the city on Saturday, July 2d, and return the evening of the Fourth.

The rooms of the Club were filled to their utmost capacity on the occasion of the first demonstration of the Club year which was arranged by the new Demonstration Committee under the chairmanship of E. N. Sewell. The Committee were fortunate in securing Mr. Monsen as speaker for this its first demonstration, his ability as an entertaining and instructive lecturer being well known.

Mr. Monsen in his remarks on "Hand vs. Stand Cameras" said in substance, after reviewing the history of dry-plate photography and the modern camera and touching most humorously upon his own gradual decline from the large-sized, cumbersome camera to the modest kodak: The stand camera found its field in architectural work, machine and interior photography. The making of pictures depended greatly upon the introduction of figures and to secure such portrayal of scenes passing rapidly before us, a hand camera and instantaneous shutter were required. The modern hand camera is the acme of the camera builders' art. To be an expert in its use is to be a photographer in all that the name implies. More care and confidence are required and as these are displayed does the work improve. Mr. Monsen displayed a direct view-finder of French manufacture which he uses attached to the top of the camera back and explained the advantages of holding the camera on the level of the eye instead of looking down upon it as is necessitated by the usual form of these instruments. The added interest and improved rendition of distance secured by the more elevated position of the instrument was explained; Mr. Monsen contending that his most pleasing work had been secured while working from horseback. The outfit employed by him in his last visit to the Indian country was an ordinary kodak fitted with the regular lens as supplied by the maker; in fact, Mr. Monsen's confidence in the good quality of these instruments is so great that he had no hesitation in starting on this trip with a camera of this type which had never been used, even to test its capabilities. The speaker's words of high praise for the regular equipment of the small cameras were most encouraging to those of his auditors who have not felt that they could avail themselves of the tempting inducements of the lens-makers to part with their money. The speaker advised that if the money must be spent the difficulty could be overcome by purchasing two or more of the regular cameras. His contention, however, Mr. Monsen was careful to explain, applied almost entirely to the smaller sizes. Following his remarks there were shown upon the screen a large number of beautiful and interesting pictures, all taken during his last trip and made with the small, cheap outfit that had been found so satisfactory. A most cordial and hearty expression of thanks was tendered Mr. Monsen at the close; taking the form of an enthusiastic applause of the Chairman's words of appreciation in behalf of the Club.

Foochow's Third Annual Exhibition

Report has just reached us of the close of this very successful Loan Exhibition. Amongst the awards in the foreign section the following local workers were honored as follows: Portrait Class, first prize, W. E. Dasonville; Marine Class, first prize, W. J. Street; honorable mention was given in various classes to Miss Blanch Cummings, Miss Francis Thompson, R. H. Bateman, W. E. Dasonville and W. J. Street. G. W. Pearson and W. T. Gracey carried off all first prizes aside from those in the Foreign Division.

The San Jose Outing and Camera Club

It is with more than usual pleasure that I find myself in a position to announce the formation of a camera club in San Jose as a result of the well-directed efforts of W. S. Johnston, A. A. Shoenheit, and other popular devotees of the camera in our sister city of the south. The experience of these gentlemen is an assurance that the mistakes of previous like organizations will be avoided and this being

done, only the most gratifying success can follow their efforts, favored as they are with a large clientele of enthusiastic and able workers as well as by a location abounding in material for the exploiting of the capabilities of the camera. The first meeting of the San Jose Outing and Camera Club was held on the evening of May 26th. The Constitution and By-laws adopted closely resemble those of the California Camera Club. The following officers were elected to serve for the first six months: President, Sanford L. Bacon; Vice-president, L. E. Wood; Secretary, W. L. Gerdes. About thirty members signed the rolls. Suitable rooms will be secured and equipped with all conveniences including operating room, dark rooms and the like. Besides those mentioned, active and enthusiastic effort has been put forth by Louis T. Lenzen, E. J. C. Pellier, Charles Southgate and other well-known amateurs of San Jose. It is the aim of the Club to make itself the center of photographic interest in their beautiful valley, and by coöperation to offer better facilities to the individual. Demonstrations and lectures on all phases of photography as well as exhibitions, both individual and of a general nature will be made a feature. CAMERA CRAFT wishes the new club the full measure of success that it so well merits and has every reason to expect.

The First American Salon

CAMERA CRAFT is authorized by the Metropolitan Camera Club of New York to advise prospective Pacific Coast exhibitors that pictures intended for their forthcoming First American Salon may be sent to our office unglazed and unframed to be forwarded in one shipment, thus minimizing transportation charges and danger of damage or loss. Pictures so sent should be in our hands early, and should bear on their backs brief and clear instructions as to the owners wishes concerning the desired framing in case of acceptance by the jury. This shipment must reach New York in time to secure the early attention of the jury in order that framing or glazing may be given the attention required. This work will be undertaken by a committee selected for that purpose, and every effort made to carry out the wishes of each individual exhibitor. This concession applies only to pictures included in this shipment and it is hoped that our Pacific Coast workers will avail themselves of the opportunity.

The Coming Convention of the Northwestern Association

The early date on which we go to press precludes the possibility of giving the full and detailed announcement which we would like to present regarding the coming Convention of this enterprising and enthusiastic body of professional photographers of the Northwest. That the Convention to be held at Tacoma will be one of the most largely attended and popular gatherings of the kind is as assured as it is possible by well-directed and united effort to make such a convention. As official organ for the Association, CAMERA CRAFT will present a full report and in the meanwhile will do all in its power to assist the Association to attain the success which it deserves in its efforts to bring together for mutual improvement that large body of creditable artists of the lens who so well uphold the standing of their craft throughout their territory. H. D. Troover, of Salem, Oregon, is Secretary, and extends to all photographers of the Northwest a most cordial invitation to join the Association, and he will be pleased to give all desired information to prospective members, exhibitors and others.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

The Danger of Mercurial Intensification

Notwithstanding the popularity of the mercurial intensification method the liability of such negatives to develop color and stains in spite of the recommended precautions is well known. My own losses in this way have long caused me to discard it. A controversy between A. Haddon and another member of the London and Provincial Photographic Society as to the action of light on negatives so intensified led Mr. Haddon to make a series of experiments on the nature of the action of mercury on gelatin. These are reported in *Photography*, of March 19th, and go far to explain the cause of deterioration in negatives intensified by mercury, and also promise a cure for the trouble. There is no need to go over all Mr. Haddon's experiments, the pith of the matter is stated in his account of the initial experiment:

"A portion of a stripping film was removed from the paper support, soaked in water, fixed in hypo, and thoroughly washed. It was then placed in a saturated solution of mercuric chlorid, and allowed to remain in contact with the solution for about half an hour. At the end of that time it was transferred to a large basin under a tap, into which a constant stream of water was allowed to flow. At the end of four hours a portion of the film was torn off, placed in a test tube, and the contents heated. Even at the temperature of boiling water the gelatin refused to dissolve, but, on the addition of a few drops of strong hydrochloric acid, solution was obtained. Into the hot solution a strip of bright copper was dropped, and the contents of the test tube again raised to the boiling-point. After about

one minute the reddish color of the copper was changed to white, and on removing the copper and drying it a gentle heat drove off the mercury, and the original reddish color of the copper returned, showing that the whitening was due to mercury deposited from the solution.

Another portion of the film was treated with fifty per cent of hydrochloric acid. At the end of five minutes the gelatin was removed, a strip of bright copper placed in the acid, and the contents boiled. Mercury was deposited, showing that a solution of hydrochloric acid decomposes the compound of mercury and gelatin. Acid of this strength would naturally be too strong to be applied to an ordinary plate, but a three or four per cent, and even acid as weak as one per cent, will also bring about the same effect.

Some of the original film was placed in a dilute solution of ammonium sulphid. At the end of five minutes it was very much darkened, and by transmitted light appeared as if it had been badly stained by oxidized pyro. This staining was due to the formation of mercuric sulphid.

The remainder of the film, not acid-treated, was allowed to soak for twenty-six hours in running water. On again testing it for mercury, it seemed to be quite as rich in the mercury compound as it was when tested at the end of four hours' washing.

Since the above experiments were made I have repeated them, and at the end of four days mercury in abundance was still present. [Mr. Haddon here passed around a piece of the film treated with ammonium sulphid after that amount of washing. The film was colored a deep brown by the mercury sulphid.]

From these experiments it would seem that soaking in plain water is incapable of removing the mercury that has combined with the gelatin, and that gelatin and mercury when combined form a much more stable compound than a combination of gelatin and alum do.

It is perfectly clear to my mind that any negative treated with plain mercuric chlorid always has left in it a large quantity of mercury combined with the gelatin; and I think I can say, without fear of contradiction, that, *of the thousands of negatives bleached with mercury and then washed and afterward blackened, not one of them has been freed from mercury combined with gelatin, and that this is the cause of the ruin of all negatives thus intensified.*"

Mr. Haddon then repeated the experiment with the addition of two per cent hydrochloric acid to the mercuric bath without preventing the fixing of the mercury by the gelatin. A mixture of two per cent hydrochloric acid and three per cent nitric acid prevented the combination, but such a bath would ruin any film. Ammonium chlorid (recommended in some books) had no effect. The author then experimented by soaking the film after bleaching in weak acids, and then found that the mercury could be washed out. This is the case even with citric acid in one per cent solution. This seems to solve the required problem. Mr. Haddon says:

"As such a weak solution of citric acid has the power of breaking up the mercury-gelatin compound, if a plate, after it has been bleached in, say, a saturated solution of mercuric chlorid with one per cent of hydrochloric acid, be washed for a quarter of an hour, soaked in a one per cent solution of citric acid, again washed, and this repeated a few times, I am convinced that the bulk of the mercury will be removed from the gelatin. This method, on the whole, seems to be the best for ensuring the removal of the maximum quantity of mercury in combination with the gelatin."

The Camera in Botany

In a lecture before the Royal Photographic Society of Great Britain, B. H. Bentley gave a lecture on the above subject. The author's extremely interesting discourse dealt more with plant biology, and especially pollenization, than with the making of the photographs he exhibited, but his advice in

regard to taking of insects in the act of entering flowers, etc., may be of use to our readers. He says:

"The taking of these photographs is rather difficult, because in such work one has generally to use a hand-camera, and yet get good focus. We cannot, of course, guess at the focus, and we have to use some sort of reflex arrangement in dealing with which we require to be more accurate than in ordinary classes of work. The only method that has been satisfactory in my work has been that depending on the use of a reflex camera; especially a reflex camera of the "Naturalist" pattern, in which the reflected image is formed in a telescope eye-piece, and can be much more accurately focused than with the unaided eye. One, of course, has to give a shorter exposure than usual in hand-camera work, when photographing living insects in active motion, and on account of the relatively large size of the image it is very liable to show traces of movement with quite rapid exposures. The size of the image further tends to give under-exposed results, hence it is advisable to use a portrait or other lens of large aperture. In the case of a portrait lens it is often advantageous to introduce slight spherical aberration to diffuse the focus."

Surface Staining on Negatives

Mr. Haddon's paper brings to my mind a useful contribution of H. W. Bennett to the *Amateur Photographer* (English) in which the various causes are discussed and for most of them a remedy is found in the use of a form of Farmer's solution, viz:

Hypo	1/2 ounce
Potassium of ferricyanid	8 grs.
Water	5 ounces

For the surface stains that develop with age, it is recommended that the surface be well rubbed with wood spirit and then the above bath used.

Gum-Bichromate for the Three-Color Process

According to the *Photographische Centralblatt* (1904, p. 77). Herren Lehmann and Nybom have made careful experiments in the laboratories of the Charlottenburg Institute on the production of composite heliochromes by two gum-bichromate impressions upon a

cyanifer print as a basis, and they find this method to be highly satisfactory. A few particulars may be given in note form. *Paper*: Zander's, Torchonpapier, No. 6, rough, imperial size. No preliminary sizing is required, and this paper does not stretch in use—quite an essential. *The first or blue impression*: (1) Distilled water, 150 c.c.; red prussiate of potash (potassium ferricyanid), 4.5 gm. (2) Distilled water, 150 c.c.; green ammoniacitrate of iron, 12.5. Mix equal parts and brush smoothly over the paper. Dry quickly, expose until the shadows are lead-gray. Develop and fix by a half-hour's washing in cold water. A weak hydrochloric acid bath (1 to 500) improves the tone. The blue print ought not to appear vigorous. *Mixture for printing in yellow*: Gum mucilage, 1 part; cold saturated solution of potassium bichromate, 1 part; yellow color mixture, 1 part; this yellow color mixture being compounded of 1 part of the citron chrome-yellow tube color of Neisch and Co., Dresden, with 2 parts of water. The layer of yellow color should be so thin that no detail of the blue print is obscured. *Printing in red*: As for the yellow, only the pigment is the same firm's tube color, deep permanent madder lake (*Krapplack, tief, echt*). If it should appear necessary to reinforce the yellow or the red impression, an extremely thin layer of the pigment mixture may be applied and another printing can be resorted to.—*The Amateur Photographer*, England.

Stereoscopic Lantern-Slides

Various ways have been propounded for obtaining a stereoscopic effect in projected lantern-slides. One of these depends on throwing simultaneously on the screen two differently colored superimposed images. These are viewed through two-color spectacles and the sense of relief is well obtained. The method is now in commercial use and two-color printed pictures called anaglyphs with the colored spectacles are sold quite cheaply. Lantern-slides are not so obtainable, but the method of obtaining them is described by M. Hofmann in the *Bull. Phot. Assoc. Belg.* Gelatin plates are made sensitive to light by immersion in a one per cent solution of potassium bichromate made slightly alkaline by ammonia. After slight rinsing, dry in the dark. These are exposed under the usual stereoscopic negatives until the image is distinctly visible. This requires

about an hour and a half, but the plate for the red image needs printing about half as long again as that for the green. After washing out the unchanged chromate, about twenty minutes, the slides are respectively stained in an aqueous solution of ponceau and malachite green. The excess of color is now to be washed out with water, so that the clear gelatin is free from stain, and after drying, the two transparencies are superimposed and bound together as a single slide.

To Note Position of Sun in Relation to Subjects

In photographing a landscape or clouds, it is imperative that the position of the sun be noted, so that in the event of combining clouds and landscape on separate plates we may not be led into the common error of using two negatives lighted from opposite directions.

To use a compass every time, and then note the direction in which the lens is pointing, also the position of the sun, is tedious, and, as a rule, quite superfluous; but if we *imagine* that the lens is always pointing to the north, it involves very little trouble to jot down the position of the sun in *relation* to the camera. Thus, if the sun be on our right hand, at right angles, we simply note down "Sun E.," if sun be directly behind, "Sun S.," etc., then in combining clouds and landscape it is only necessary to pick out a cloud negative bearing the same distinctive letter as the landscape negative.

Naturally, in the case of photographing a view or scene intended as a record of the spot, it is essential to use a compass, but for purely pictorial work the above mentioned plan is perfectly adequate, and saves time and trouble.—H. L. in *Photography*.

Who Discovered Photography?

Of the excellent little manuals of the *Photo-Miniature* series, this brochure is among the best. The writer not only gives an impartial statement of a subject that has often been acrimoniously debated, but he tells the story of the origin and development in a delightful manner, so as to make it as interesting to the casual reader as to the specialist.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

What We Really Photograph

Were you asked what you photographed the last time you had your camera out, you would name over a list of the various scenes that were before the lens at the time that the exposure was made. Are you quite sure you would be right? These were not the things photographed. What your plate really did reproduce or what you photographed was the light reflected from this scene that occupied the space before the lens. If you would just take this fact into consideration your work would be simplified and your results more pleasing. A portrait is to be attempted. Your subject is placed near a window and the exposure made. A result is secured. You curtain the lower half of the light, you draw up a reflector on the shadow side and you place the background at a certain angle that its effect may be more pleasing in gradation of light and shade. If you do this intelligently and observingly and then make another exposure your resultant picture will be much better. And why? The same room, the same camera, the same plate and the same sitter have been employed. It is the light and shade that have made the change. It is these that make our picture. Not in portraiture alone is this true. Our landscapes are subject to the same rule. Composition we may obtain, perhaps, in a certain landscape from a given point of view under many varying conditions of lighting, but with even these fixed requisites there will be a change in the emphasis given this line and that mass as the direction of the light changes. Our thoughtless "snaps" at pretty bits of nature will be as lacking in pleasing quality when compared with the work of one who realizes the importance of light and shade, as was

our first portrait compared with the one made understandingly and with an eye to the effect of light and shade as controlled and modified by our curtaining of the light and use of the reflector. Let us cease to photograph the objects in front of our camera and try the other way of photographing the light that they reflect.

That Wet Negative Proofing-Box

A local correspondent who does not give his name complains that he has built a box according to the directions given in the last issue, and that it fails to fulfil his expectations. It will not permit of enlarging, and my correspondent contends that the length of the box is insufficient. Mr. Roloff says the box is to be made twenty-four inches long. This length with a lens of even six inches will permit of copying full size, which I believe is about all that is required in producing post cards from a $3\frac{1}{4} \times 4\frac{1}{4}$ negative. Using a five-inch lens with its position changed to about that shown in the illustration, but $22\frac{1}{2}$ inches would be required as the length of the box, and but twenty inches for copying same size. Assuming the difference between the two sets of cleats shown at the end of the box to be $2\frac{1}{2}$ inches it is evident that one could, using a five-inch focus lens, copy same size and enlarge to double by simply changing the position of the lens and using the right set of cleats in which to place the kit carrying the negative. As Mr. Roloff says: "If a larger or smaller image be desired provisions must be made to move the negative as well as the lens." I can assure my correspondent that a satisfactory lens need not be longer than five inches in focus, in fact, the

lens with which the ordinary $3\frac{1}{4} \times 4\frac{1}{4}$ camera is equipped will answer admirably, and it will be found to be very nearly that length of focus. As cameras of this size are sold for a small sum the cost of such a lens can not be very great.

Why So Many Albums?

There is a club or society composed of job printers throughout the country that is conducted much on the same plan as our several postal camera clubs. They circulate a set of samples showing their best work, each member one specimen for the month and these are criticized in turn by the members. Do they paste these samples on a mount or in an album? I believe not. The specimens are simply all printed on a sheet of paper of a certain prescribed size, allowing the margin to be what it may. I candidly believe such a plan hardly advisable in our own case, that of the postal camera clubs, for the reason that the scheme of mounting often teaches us nearly as much as the picture itself, making the use of an album advisable, but in the case of many of our collections of prints an album not only is entirely unnecessary but is even detrimental to the appearance of the results of our efforts to present these prints in an attractive manner. With a printing-frame a size larger than our negatives, a sheet of stout glass cut to fit and the use of a mask, our prints can be so made that there will be a strip or margin at the left end or side to permit of holes being punched and the prints all sewed together in the form of a book, or "album" if you will. The album, like the mount, is in reality but a survival, not of the fittest but of the practice made necessary in the past by reason of the thin support employed for the emulsion in the days of albumen. As a support for our prints in this day of heavy stock and small negatives, the album page is superfluous. It may be urged that if of a pleasing tone it serves to set off the print mounted upon it, but this can hardly be possible in the case of an assorted set of prints and one shade of leaves. Where one print might gain materially, the next will not and the third might actually suffer. Try the experiment of allowing the paper to form the page and by using a mat between it and the negative in printing, secure only that part which forms the picture. The collection will be in a

more compact form, the "leaves" will lie flat and I am quite sure you will be pleased at the result. The larger paper will cost a little more but the cost of the album is saved. The use of the mat and the adjustment of the paper will give a little trouble perhaps but the time spent in mounting the prints in the album is saved. Altogether, the plan is worth a trial, say, with a set of prints showing the work made on your last vacation.

An Addition to the Outfit

I was out with a few camera enthusiasts not long ago and we came upon a picturesque old tree trunk on the bank of a small stream in just such a setting as one would wish. All that seemed needed was a little interest given the base of the trunk and this was easily supplied by a member of the party. From a shadier spot were gathered a few blossoms of generous size and these quickly attached to the stems of some less pleasing growth at the base of the tree. To accomplish this a few strips of gray passe partout binding were brought forth. I learned that my friend always carried a few of these strips in the bottom of his camera case. They could be used in a variety of ways. A broken ground glass could be made serviceable and the pieces, if not too small, held temporarily in place. A leak in the bellows could be repaired for the time being. A bit fastened on the holder so as to seal the slide in position was a safeguard against the danger of having inquisitive persons inquire into their contents, did they have to be left in hands not too trustworthy. In fact, I believe he gave me a list of over a dozen uses to which these strips of gummed paper could be put. Candidly, it seemed from his description of their manifold uses that going afield without at least several of them would be but to court failure except under the most favorable conditions.

Developing in Hot Weather

As I advised a correspondent last summer, amidol should be selected as a developer because of its not requiring the assistance of an alkali to become operative. A good formula for such a hot-weather developer is as follows: To fifty ounces of water add two ounces of the best recrystallized sulphite of soda and twenty grains each of bromid of potassium and citric acid. When ready

to develop add two and one-half grains of dry amidol to each ounce of the above. If further precautions are necessary to prevent softening of the film, place the plate in a bath composed of one part of formalin in fifty parts of water, for a few moments. Formalin added to the fixing bath will also assist. The following formula is suggested: Regular hypo solution, one in four, one gallon; metabisulphite of potassium, one ounce; formalin, one ounce. Working in this manner and with the formula given above, the use of ice can be dispensed with in the most sultry weather. Even where no damage to the film is expected it is well to employ a little formalin in the fixing-bath or to use a bath after fixing in order that the negative may be blotted off and dried rapidly so that circular depressions sometimes resulting from slow drying in a warm, damp atmosphere may be avoided.

A Cure for Metol Poisoning

Two inquiries have come in the last month for something to relieve or prevent the effects of metol poisoning. I have not had the same request before for several months. That metol will, in a few rare cases, have an injurious effect upon the skin of some persons seems acknowledged. On the other hand, I have used this most excellent developer continuously and have known others to do so without the least indication of any undesirable effects. One acquaintance in particular, soaks his hands in the solution for several hours each day while doing the developing for a large stock house, and does it with entire safety. Here is a remedy to be applied locally that is said to give great relief in case of such skin trouble:

Ichthyol	1 ounce
Lanolin	2 ounces
Vaseline	3 ounces
Boric acid	4 ounces

This will prevent the drying and cracking of the skin as well as the itching which accompanies the trouble.

Platinum Developer

An Illinois correspondent wants a developer for platinum paper other than that supplied by the manufacturer of the paper. I do not know of anything better than pure, neutral potassium oxalate. Indeed it is doubtful if the developer supplied by the

maker will give any better results. Dissolve one ounce of the oxalate in eight of water and your developer is prepared. Sepia effects are secured by adding a small quantity of mercuric bichlorid to the developer. See our June issue for a very instructive article on the platinum process by Mr. Zimmerman.

Arranging Flowers

I occasionally take a little amusement by reading the advice offered the amateur through the so-called photographic departments of the lay press. Here is a sample: "The sister, the wife, or the mother, will here prove of great assistance, because it would seem that a woman can intuitively drop a few flowers into a vase and they arrange themselves without seeming effort on her part." What do you think of that? The writer was trying to explain how one could avoid the difficulty of having his pictures of flowers appear stiff and unnatural. I do not wish in the least degree to imply that the ladies are at all lacking in all the capabilities that this writer attributes to them when the arrangement of flowers to please the eye is under consideration. The arrangement of flowers for successful and pleasing portrayal by means of the camera is an entirely different matter. One of the best and most artistic workers in this line in England is a lady that has written pages on this theme; matter that to other than the camera-worker would be unintelligible, and mainly on the subject of the proper arrangement of flowers. She has evidently not found it practical to rely upon her happy faculty inherent in her as a "sister, wife or mother," of doing this "intuitively." In the arrangement of flowers one must consider the grouping from an artistic standpoint as seen when reproduced upon the flat. Such an arrangement is rarely pleasing, or at least, not wholly satisfying when viewed from a little different angle. The spacing in relation to the picture space must also be taken into consideration. The foreshortening inherent in a lens of even normal focal length must be considered as must also the limited depth of focus when working at such close range. At the same time, I have never tried it and it might be that I am mistaken. You might try the plan advised and be surprised to find this dependence upon this "intuitively" method of working was a complete solution of all the difficulties.

With the Process Workers

By WILL SPARKS

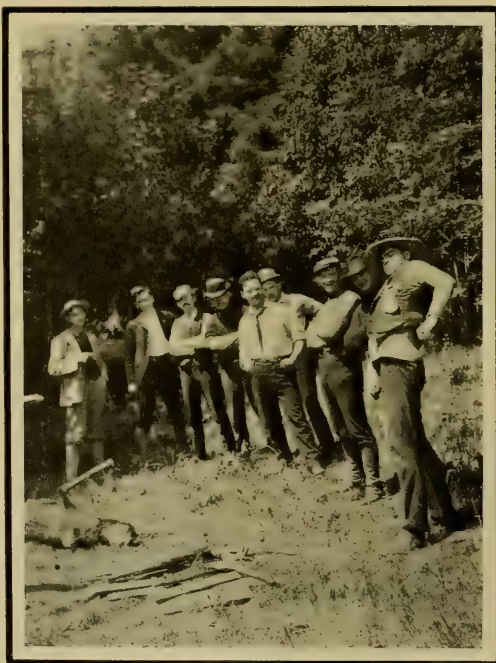
In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

An Absorber of Ultra-Violet Rays

Chlorophyl is rapidly coming to the front as an absorber of ultra-violet rays for the three-color process. It is used in the form of a strong alcoholic solution. This gives a dark green tint by transmitted light, and a red surface coloration when presented to ultra-violet rays. It is easy to prove whether the solution is an absorber of ultra-violet by presenting another cell of the solution to the light coming through the first cell. No red surface coloration is visible, and consequently we can assume that no ultra-violet has in any manner got through. The same thing may be proved by presenting other liquids to the transmitted light. Paraffin oil and machine oil, which have a beautiful blue fluorescence under ultra-violet rays, are inert when the chlorophyl is interposed. Sulphate of quinine, dissolved in dilute hydrochloric acid, is said to be one of the best absorbers of ultra-violet, but, according to my experiments, this seems to be an absolute fallacy. It certainly gives a fluorescent blue surface tint, but it still transmits a good proportion of the ultra-

violet with all the other rays. The visual tests are corroborated by the photographic tests: sulphate of quinine allows practically all the spectrum to pass, even with brief exposures. Aesculin, which is an extract from the bark of the horse chestnut, and is a light white powder somewhat resembling

pyrogallie acid in appearance, is a good absorber of ultra-violet. One part dissolved in 500 parts of water is sufficient to make a solution which will act as a screen for the ultra-violet. By transmitted light it is perfectly transparent, but gives a beautiful fluorescent blue surface coloration when exposed to the electric arc. Its absorption effect on the spectrum is very marked, both visually and photographically. Filters which absorb or subdue the ultra-violet without absorbing any other portions of the spectrum may also be described as compensation filters.



MR. THOMAS HOPPER, OF THE SUNSET ENGRAVERS' OUTING CLUB, RECEIVES A SOLID COPPER MEDAL FOR THE GALLANT RESCUE OF A DROWNING COMPANION

New Multi-Color Press

An expert lithographer and color-printer is now constructing and has partly completed a novel four-color simultaneous printing-press, with especial regard for the demand of the three-color print.

For Three-Color Workers

Following are a few "pointers" for three-color workers which Frank Colebrook recently contributed to the *Progressive Printer*. All of them appear to be based on study and experience, and many of them should prove of practical value to all operators:

"One of our best known engravers is working the direct process, and finds that it saves a great deal of labor.

What you gain by the indirect process is that you don't become confused between the screen dots and color record.

We have always to remember that the thing has, after all, to be printed, and the dots on metal have to be practicable in all ways.

It does give the printer a little extra trouble if you use direct dry plates; not quite so much with direct collodion emulsion.

You can avoid a screen pattern by using a suitable stop.

By using a long slit-like stop you can get a single-line effect from a cross-line screen.

It is best in most cases to etch with the plates face downward.

Try to get used to looking at black proofs and realizing color. But if you feel doubtful, pull a colored proof before you go too far in the etching.

If you have any color sense you can do a lot of fine etching before you pull any color proof.

'Theoretically we should not fine etch,' says Mr. Newton, 'but I have never seen any blocks which were not improved by fine etching, and most would have been absolutely hopeless without it. Yet I look forward to the time when we shall do very little fine etching.'

With a different character of plate you must alter the character of the filter.

Mr. Newton, the principal of Bolt Court School, from whom I have gleaned a good many pointers at times, says it is to be hoped the Barnet people will give us a plate as red sensitive as the best which now comes from abroad. The best plates miss a great deal in red sensitiveness, as it is easy to show by diagram.

It means tremendous exposure to get a plate sensitive right up to the end of the spectrum; right up to deep red. It does not matter how much exposure you give; it

should be of the same region. It should be weaker or stronger of the same region.

Directly you get a longer or shorter exposure you alter it. The more exposure you get, the more it spreads in both directions. A filter with a strong maximum is going to give you a different record for everything you put up, according to the exposure.

It is possible to have a filter that looks all right but lets through so much unwanted light as to be absolutely no good.

You must try filters with the plates you are using.

Mr. Newton has shown his students reproduction of spectrums by A. J. Bull of the Bolt Court School and said: 'That gives, I think you will admit, the best spectrum you have seen up to now.'

Regarding certain lantern views shown with true complementaries, he remarked: 'You will see how far from perfection our ink-making is.

'I am putting in here a red record, and combining the rest of the spectrum, which gives a complementary color, blue. There is no blue ink at all in commerce like that brilliant color which you see before you.'

The Middle Tones

In a recent issue of *CAMERA CRAFT* I referred to the general tendency of modern half-tone workers to lose the middle tones, and produce a cut all black and white. Since then I have come to the knowledge that one of the largest houses on the Coast, with a reputation for first-class work, had already realized this undesirable state of affairs and have taken measures to remedy it. They are very much pleased with their results, and say that it is paying them in more ways than one. Briefly, their system is to make all cuts measuring over thirty inches on plates by themselves. These workers realized that the result obtained was not all in the etching, but that if they really wished to copy what the customer gave them they had to "get it in the negative." In order to save as much time as possible they use a prism, and so avoid stripping. As the printer knows just what kind of a negative he has he coats his plate accordingly. With a perfect print the etcher has less trouble, the customer is better pleased in the end, and general satisfaction results all around.

New Anilin Ink a Danger

A certain brand of cheap printing ink has recently made its appearance that is likely to cause trouble and annoyance to photo-engravers. One man in this town recently found it out to his cost. The ink in question is of a blue-black color and certainly contains anilin. This will dissolve in water and when the printed piece of newspaper was used for turning negatives the anilin dye soaked into the film staining it with blue spots and ruining it. Most San Francisco engravers, who use paper for turning negatives, naturally use the City papers which so far do not seem to have used any of this ink, but they may at any time. The paper referred to as doing damage was the "patent inside" of a Fresno County sheet, most likely printed somewhere in the East. The engraver used it because it seemed to be of the texture he desired for his work.

Duplicating Cuts

Arthur P. Eyman, of Atchison, Kansas, recently contributed the following valuable suggestion for process-workers to the *Inland Printer*. It has a great many advantages over electrotyping to say nothing of its greater speed:

"We recently had nine two-column etchings to make from one drawing of a trade-mark. By placing a sheet of red glazed paper, sufficiently large, on the copy board and the copy off to one side over it, it was an easy matter to make three exposures on the one negative by just moving the copy forward its own length for each successive exposure. This proves a quicker method than exposing part of the negative at a time by manipulating the dark slide and negative, or using masks, as it is easier of access and gives equally good results. A red glazed sheet is recommended, though black glazed will answer nearly as well. Mat or flat papers of either color, however, absorb too much light to give the best results, especially on slight reductions where long exposures are necessary. After drying, the negative was stripped to the center of the printing-glass and the glass covered with a sheet of tin-foil except where the negative had been stripped. A piece of zinc three times the size of the negative was then sensitized and marked off into three equal portions on the back, and the central portion exposed first, then each end in succession, which gave us the nine

prints on one piece of metal, permitting all to be etched at one operation, a matter of economy both in negative-making and etching. This duplicate printing method will be found equally serviceable in making color plates where the drawing permits more than one to be made from the same negative. In fact, I have one of my printing-glasses painted black over one half its surface on which to strip negatives for two-color jobs. The advantage lies, of course, in the fact that color plates from one negative can not fail to register and, size permitting, as many prints as the negative will produce without injury to itself can be made and etched at one time."

Half-Tones From Royal Bromid Prints

As a general thing the photo-engraver has a horror of royal bromid prints, for well he knows that there is a strong probability of his having to do the work over, and not only once but several times. Now, why is this? The principal reason is that royal bromid paper, as far as the chemical quality of its light rays are concerned, is very different from any other paper on the market, and besides the paper is rough. An ordinary royal bromid print when considered in connection with the half-tone worker's wet plate, has no whites and no blacks. The yellow color of the paper is very low on the right side of the spectrum, and the silver deposit is very far from being darker than a pale gray. The result is a flat image with all its detail destroyed by the prismatic effect of each tiny protuberance of the rough paper. To overcome all these objections is almost impossible, but a great deal can be done without injury to the print. In the first place it is desirable to get some "depth" in the print. This can be done by giving it a coat of albumen, which acts as a varnish and brightens it up. When the job is finished this can be washed off, and will leave no sign unless the work be done carelessly and the face of the picture scratched. This one operation will generally put details into the shadows that did not show before. Then it is expedient to use as coarse a screen as the job will permit of. By this the prismatic effect of the rough paper is flattened out and a very agreeable effect produced.

CAMERA CRAFTY



Price 10 Cents

San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CAL.



OUT OF THE MIST
by E. N. SEWELL

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX

SAN FRANCISCO, CALIFORNIA, AUGUST, 1904

No. 3

Bromid Work

By E. N. SEWELL

Illustrated from photographs by the author

PART I

Whatever may be said in favor of this, that, or the other of the various printing methods now available to the up-to-date photographer, it remains an undisputed fact that with Bromid Paper the user is able at the minimum of expense, labor and material, to obtain the maximum of results from his negatives. Its uses are more varied than those of any other paper, for with it enlargements are as readily made as are contact prints, while it is easily adaptable to the making of transparencies and enlarged negatives, and with it quick proofs may be made from plates just out of the hypo—truly a wide range of usefulness, and it is capable of the highest artistic results, as is evidenced by the very large percentage of bromid prints now exhibited in the salons. The amateur, however, to whom it is probably of most value, uses it very little, and it is for the purpose of directing his attention to the process that this paper is written. The writer, as is common with the amateur class, is able to devote only his spare hours to the recreation of picture-making, but he is too fond of nature and fresh air to devote many of his spare hours in daytime to the confinement incidental to printing by any of the printing-out or semi-printing-out methods. Bromid Paper being a “development” or “artificial light” paper is therefore the only means that can be employed, and it is this very quality, most valuable to the man of limited time, that is its first recommendation.

It is not contended that Bromid Paper replaces any and all other papers,—for the fastidious worker having in view a preconceived result will choose the method best suited thereto, still the variety of results to be obtained by this method is far greater than that by any other, mainly so on account of the absence of mechanical limitations, which is another point I wish to make much of as favorable to the amateur most of all.

The term Bromid Paper includes all development papers, but is generally used to indicate only the original rapid varieties, now represented in this country almost exclusively by the “Eastman,” “Nepera,” “P. M. C.” and “Monox” of domestic manufacture, and the “Rotograph” of German origin. The “gaslight” varieties, such as “Velox,” are very much slower, and while technically belonging in the bromid class, are so different in their range that they will not be considered, except incidentally, in this paper. The bromid emulsion is gelatino-bromid of silver, and is similar (although vastly slower) to that used in the manufacture

of ordinary films, or dry plates. In variety the grades are nearly infinite. The manufacturers offering glossy, mat-enamel mat, smooth, rough and very rough; in various weights and in several tones, and capable of being toned by subsequent treatment to almost any desired color.

The chief advantage in the use of Bromid Paper consists in the freedom from the size of negative used, which is a real emancipation, for with other papers printing only in contact, one's results cannot be either larger or smaller than the printing negative, and how often it happens that the real picture is in one little corner of the plate, and the rest worse than waste glass, for being there the whole is printed and the picture lost sight of, while if printed alone by masking out the



REFLECTIONS

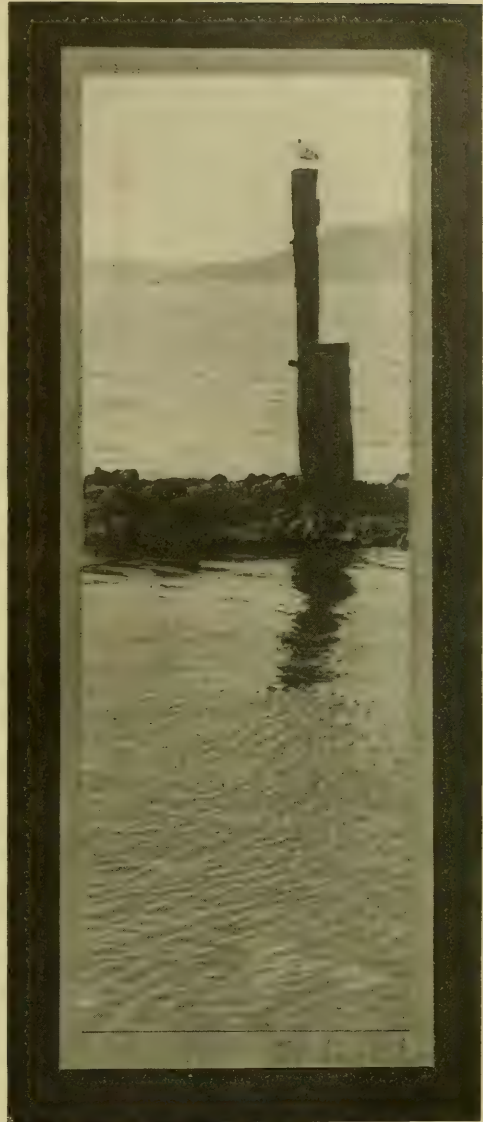
rest of the plate, it becomes too insignificant to be of any account. The most of us not being able to make our own cameras, and coat our own glass, are limited in size usually to one, or possibly three, of the smaller boxes, the result being that without bromid enlarging we accumulate vast stores of small prints—too small, when in quantity, to be regarded as really important. It's like having your entire income in cent pieces—good, but tiresome. In the writer's collection are prints varying from one inch square to 16x20 inches in size, all from small negatives—none over 4x5. From a portrait negative of that size I can show a miniature no larger than a postage stamp, and from the same negative a life-size head. Judging from the questions asked me people must think that I have a house full of cameras, and that I habitually go "snap-shooting" in Chinatown with a 16x20 box. The secret of this is that when a good thing is secured, no matter

how small, I am able to put a print on Bromid Paper of the size that best suits the subject and my own whims. It will thus be seen that, considering the great varieties of grades and freedom from limit in size the bromid method offers more for your money than any of its competitors. Of course there is always a way of getting around a thing, and the way to get larger prints from your small negatives by other processes is to make large negatives from the small originals, but it is a way full of considerable expense and repeated failures; you get a large negative and thus you have reduced your limitations from one size to two sizes, and in doing so the chances are that you have resorted to Bromid Paper to get it—for a 16x20 glass negative is expensive, compared with one of the same size on Bromid Paper, made transparent with a little castor oil.

As to the quality of the results obtainable on Bromid Paper the claim is commonly made that they are inferior to those acquirable on some of the other printing mediums, but this is mainly a matter of manipulation. There is probably more poor bromid work than platinum work,—the reason being probably that a “passable” print may be gotten on platinum with more certainty than on bromid. There are many considerations that must be carefully weighed in order to obtain the best result from a negative, and one must be willing to give thought to his work, whether it be making photographic prints or shooting fish, and in each case the game is worth the ammunition. The beautiful blacks and pearly grays claimed as platinum monopolies are to be gotten on Bromid Paper, but one must know how in either case.

With Bromid, however, even an experienced worker is uncertain after he passes the black and gray tones, for while he may get beautiful tones in browns, reds or greens, they are not easily controlled or determined beforehand.

The kind of negative required for bromid work is largely a matter of choice, and depends mainly on the result desired. The sharp, brilliant commercial view, of course, demands a “plucky” negative. The over-contrasty negative is as valueless



THE SENTINEL OF THE GOLDEN GATE

in bromid work as in any other process. Soft, thin negatives are claimed to yield the best enlargements by the Rotograph manufacturers, but I have found a very decided limitation in this direction except when the desired result is of the flat tone, fuzzytype order. A thin negative that will give a passable result on solio or the more contrasty "gaslight" papers is useless, as a rule, on Bromid. The reason for this is that while the paper may usually be had in either "hard" or "soft" working grades, even in the hard grades the emulsion is much softer than in the other papers. This fact may be taken advantage of, however, at the other end of the line, for a negative that yields only "soot and whitewash" on *Velox*, may be made to yield a detailful print on Bromid. The gist of all this is that in making negatives for bromid work of standard quality, they should be a little stronger than if intended for other printing mediums. This is said however with a standard artificial light—an electric arc—in view, which is rather "hard." Soft, well diffused daylight will admit of softer negatives being used.

Different combinations of exposure and development offer means of wonderful modifications of results, the extremes being short exposure and hard development for the maximum of contrast from a weak negative, and long exposure and soft development for a softened print from a harsh negative. These are the same considerations that must be taken into account in exposing and developing the original negative. These modifications are also helped out by the grade of paper used,—the hard emulsion, smooth-surfaced paper giving most contrast, and the soft emulsion rough-surfaced paper working in the opposite direction. In exposing Bromid in contact with the negative, I find the "standard" exposure for the average negative to be about ten seconds at two feet from a 16-candle-power



THE FERRY



EARLY MORN

incandescent electric lamp. To *decrease* contrast, or with a hard negative, eight inches is better, and to *increase* contrast, or with very soft negatives, the distance may be increased to several feet without, in either case, altering the time from ten seconds. The rule is, "The intensity of illumination varies inversely as the square of the distance from the source of light," which means that in ten seconds you get at one foot four times the light you get at two feet, and that at four feet you get only one fourth that of two feet. This rule may be followed roughly, but reflections upset its exactness very rudely. I use mathematics only in making up solutions, they are too troublesome in exposure and other lines except as a rough guide.

In enlargement work the same end must be obtained in other ways—for the distances between light, negative and lens are practically unalterable. Sheets of tissue paper, or ground glass, may be interposed between the source of light and the negative, or the lens aperture may be cut down. The reason of this is that a negative being made up of spots of density varying from clear to opaque glass, a light of a certain power will penetrate the clear glass at any distance, but to print detail in the high lights (the nearly opaque spots), the distance between the light and negative must be reduced or the light increased in brilliancy.

It follows that in enlarging from a weak negative the light must be cut down, or the distance increased, in order that the high lights (the darker parts of the negative) may have more chance of stopping the rays of light.

In making an 8x10 enlargement from a 4x5 plate, the normal exposure, using an ordinary arc lamp with three thicknesses of ground glass between it and the negative, and stopping the lens down to about 16, is about ten seconds. This may be taken as a rough guide, and test strips exposed until the standard is found. Only artificial light has been referred to. Daylight is an abomination. It's either too strong or too weak, and changes from hour to hour, and there can hardly be a standard to go by from day to day. Of course one can learn to judge illumination to a certain extent, but even then it is haphazard work.

In contact work any old artificial light will do. An electric lamp is handiest, but exposure may be made by opening a door or slide behind which gas, electricity or oil is burning.

Enlargement work requires more of a plant and a much stronger light. Almost any light that will operate a magic lantern will do the work, exposure depending on its strength.

The printing of Bromid Paper by enlargement is much more complicated than ordinary work, but the ambitious man will find means neither too elaborate nor expensive.

(To be continued.)

In giving space to this article, which is one of a series, we congratulate ourselves that we are presenting to the readers of CAMERA CRAFT matter that we can assure them is thoroughly practical and to the point. Mr. Sewell has employed and tested all the methods of work and formulae offered within the last few years, and such as he will offer to their consideration may be relied upon as being found the best by at least one worker who has demonstrated the practicability of bromid printing, both as a means of artistic expression and as a cheap and convenient printing method.—
EDITOR.

Long Exposures

By MILTON WAIDE

"One Man Method," N. Y.

The other day I heard an old man relating incidents of his early life to a group of interested friends. He used the words: "Oh! how different things are now from when I was a boy," then he added, "I don't think many of them are so much improved now, either." It occurred to me then that though I had not expressed a like opinion concerning present photographic conditions, I have frequently given thought to the matter and been tempted to believe the old man's opinion applicable, at least partially, to our present-day photography. I think that if questioned, photographers would admit their temptation to share a like belief.

Photography advanced during the past few years with giant strides, surpassing perfection, any of the other sciences. It is different from the past, but I am inclined to doubt that in every way there has been an improvement. It is pared with the modern photograph (low toned, times ludicrously spring of the paint, enshrouded in its outline lost, often aping the offer's brush, and type is antiquity something about reotype, if it be a makes you think remark: "How



is said to have adapted past few years with passing in its rapid the other sciences. photography of the inclined to doubt there has been an improvement. It is pared with the graph (low toned, times ludicrously spring of the paint, enshrouded in its the old daguerreotype itself; but there is that old daguerreotype good one, that of the old man's different things

are now, and I believe they have not so much improved." I have, of late, carefully examined a number of these exquisite old portraiture, and marveled at the softness of expression, the pleasing facial quality they presented, and wondered what was the cause.

After careful thought, although I believe other reasons for attractiveness exist, I have concluded that much of the pleasing effect in facial beauty, the softening of the expression, is the direct result of a long exposure in the camera. Some proof of the correctness of my theory lies in the fact that at times patrons have said that in some peculiar way an unexplainable result in expression obtained in my photographs of them caused a thought of their similarity to the old daguerreotype. (As there are two ways of taking this opinion, I shall not apologize for any attempt at self-praise: one way might be far from praiseworthy.) The fact is

that for several years I have been a firm believer in, and a practitioner of the theory of making as long exposures as possible without actual movement of the subject. I believe that there are very few photographers of today who will side with me in this matter.

Nevertheless, I firmly believe that the right way to obtain softness in facial expression is by long exposure. I give my reasons:

The present-day photographer aims, in every way he can find, to shorten his exposures. The endeavor seems to be in keeping with others of the general trend of the art science toward rapidity and machine-like photography. I should like the reader to see, placed together for comparison, some photographs by quick exposure method and some of the longer exposure sort from my humble studio (mind you, I am now writing only of the peculiar softness of expression caused by long exposure), and I am sure you would conclude that although in each case an ideal expression is obtained, it is a fact that in the quick exposures the little facial expression lines of drawing are cut, stamped as though carved in stone. While in the long exposed portraits there is a mellowness, a soft blending of the lines of drawing which produce what is called "the expression," and is what charms in the old daguerreotype.

Why does the long exposure cause such effect? Because during a 15 to 30-second exposure (with a head-rest, for it needn't bother any one if you know how to adjust and use it, and I will tell you how later), while your small talk to the subject is continuous and pleasant the expression will change, will vary with each thought you present. This varying of expression during the exposure may be imperceptible to the operator, but it is sufficient to relax, to move the little lines which form expression, until the result is really a composite of expressions. A blending into a natural and lifelike result, a softened facial expression that always appeals and never tires. Of course, with photography of children, nervous people, animals and moving objects, long exposing is impossible, but in my own experience I find it is practicable with nine tenths of adult sitters to expose the plate for from fifteen to thirty seconds. And thirty seconds is much more to my liking than is fifteen.

There are many who will disagree with me, I well know; but I am confident that my record of but *three resittings* in my past two years' business, is due to the universal non-criticism of expressions, the satisfying quality of which emanates from quite long exposures. The patron must be kept interested by your conversation during the time the lens is open; and practice in this will perfect the ability to change, to control the subject's expression at your will.

The long timing of exposure gives opportunity to screen down skylight to a low tone, thereby rendering proper flesh and other values; also allowing expansion of the pupil of the eye, until altogether the negative, after a long exposure for detail in shadows and softening effect of expression, presents a result so pleasing, that with the very little retouching necessary to that sort of plate (if right developer, and particularly artificial light printing paper has been used), the customer sees, even in his proof, an effect none of his former photographs has presented. His proofs show life, character is not eliminated by retouching, and with the softness of expression which so pleases, the flattery is sufficient. Just a few words relative to the use of the head-rest. I do not say "use it," but I have used one, and I believe without discomfort or ill effect with every long-exposure sitting I have made.



PORTRAIT STUDY
by MILTON WAIDE

After some little time spent in "fussing" around the sitter, I gently place the head-rest in position, saying, "It is my intention to use this but temporarily, to retain a pose until I see if I like it." I talk continually thereafter and forget to remove it. I never have a patron object to its use as I use it. Anyway, "the proof of the pudding is the eating thereof," and "the end always justifies the means." I have for several years used the long-exposure theory with success. It's all right. "If I can, you can!" Try it!

Carbon Printing

In demonstration of carbon printing before the members of the Leeds Camera Club, Robert Bourke said: The process is one that the average amateur fights shy of—why, he cannot understand, as it is no more difficult than any other method of printing, and certainly gives a variety of results equaled by none. The process has the special recommendation of the painter artist, as it gives what may be termed a "juiciness" in the shadows entirely absent from all other printing mediums; it is also absolutely permanent, therefore eminently as suitable for the "record" worker as the "pictorialist." Mr. Bourke's demonstration specially pertained to the single transfer method, and he recommends that the carbon tissue should be purchased in an insensitive condition, and the sensitizing operation be performed as required for use, for all sizes up to 15 by 12. The tissue keeps for an indefinite time, when not sensitive, but rapidly becomes insoluble when sensitized, unless kept in a storage box with calcium chlorid, and under this condition will only keep about a couple of months, oftener less. The principle underlying the subject is that if sensitized tissue is chemically dry, or saturated with water, it is then insensitive to light, but if moist it is then highly sensitive. The formula of the sensitizing solution is one ounce ammonia bichromate of potash, 30 ounces of water. Mr. Bourke immerses the tissue in the solution, and passes a flat camel's-hair brush over it to remove any air-bells that may have accumulated on the pigment, leaving it in until it curls outward, then hang up to dry in dark room, free from gas or other impurities of the air. A more recent method has been recommended by H. W. Bennett, a worker whose experience is a guarantee of reliability, who makes up a solution as follows: 1 ounce bichromate of potash, $\frac{1}{4}$ ounce citric acid, 50 ounces water, and $\frac{1}{4}$ to $\frac{3}{4}$ ounce of ammonia. By this method no regard need be paid to the question of purity of the drying chamber, but it increases the time of printing about 50 per cent, whilst it takes some four to seven hours to dry the tissue. Having got the tissue dry, ready to print, and selected the desired negative, it requires that—what is known as the safe edge—a strip of paper be placed either round the border of the negative, or on the glass in printing-frame, the latter being different from the ordinary frame, inasmuch as it requires to have a stronger pressure to prevent loss of definition in the subject. Carbon tissue having no visible image it is necessary to have some guide in printing, and actinometers in numberless varieties have consequently been provided. Mr. Bourke's rule being to provide himself with every fresh one placed upon the market, he has, by now, quite an interesting collection, which he exhibited to the audience.



The Rod and the Camera

By OSMOND WILTHER

FIRST PAPER

The readers of this popular Magazine, devoted more particularly to the arts and practices of camera craft, will not, the scribe hopes, be indignantly affected by any undue suggestion of precedence that may be implied by the position of the word "rod" in the five words of the title. It is purely an humble effort at tuneful arrangement which strives for happy repetition in the search for harmony, whether in the construction of a sentence or the selection of a wife. Thus, it may be urged, with all due obeisance to the mighty decrees of our captious critics, that while the camera finds its word-place last it is not the less important in that relation to the rod.

Persuasive esteem and consistent encouragement from a time-honored friend and photographic enthusiast, serve potent inducement to venture a few lightening and enlightening observations on one or two originalities, vagaries, difficulties, absurdities and impossibilities that invariably attend the births of new and wabby ideas. Here, the author would essay some allusions, if only distant ones, on the alliance between the camera and that supple instrument of Waltonian skill, the fishing-rod.

The practical value of the camera is so rapidly widening its sphere of operations, that to say, simply, that it is well to take an instrument along on a trip of any kind and more particularly on a fishing expedition, would be to utter one of those originalities to which the scribe refers above, as well as to excite a

suspicion in the minds of his patient readers that he is either in a state of mental convalescence, or is decidedly unripe in his serene vacuity of such a platitude. Of course it is obviously unnecessary to make any very emphatic statement that the rod, with all the prospect that it implies, is, really, in its history, incomplete without the ever-pleasing, useful, and often valuable assistance of the camera.



The rods, placed in some artistic adaptation to the walls of a sportsman's den, hang, in themselves inexpressive, but as keen inspiration to a retrospect of many excursions of pleasure and instruction. How much more insistent, then, to the sense of happy recollections and on the possession of valuable data, is the open photograph album, whose pages turn repeatedly with illustrations of places, incidents, and events, which, among other things, accent the prowess, virtues, and associations of those rods, and, in the hours of contemplative repose, quicken reminiscence and delight the imagination.

The use of the camera, however, among the yearly increasing number of anglers, is not as frequent as it should be, and over a wide acquaintance and range of

fishing territory, the writer has rarely noticed the camera in company with the rod. There may be reasons enough for its absence, no doubt, and not the least of them, perhaps, is the very appreciable addition of weight and discomfort that combines in the carriage of a photographic outfit with a fishing kit, encumbering the movements and freedom of the fisher, not alone en route, but more particularly in the actual pursuit of his beloved sport. On the other hand, the requirements of the camera may be very conveniently reduced, and good management can deftly devise, according to the prospects and possible contingencies of an excursion, a ready, limited, and compact outfit, brought into more or less easy operation even under awkward and difficult circumstances.

The classic and poetic aspect of the trout angler, so well known to the majority of people, presents, in his use of the camera some interesting situations for the exercise of ingenuity. The scribe questions the probability of a similar effort as illustrated in an interesting photograph entitled "The Phantom Hand." It may not, at first glance, suggest much, but it pleads some inquiry and we will follow the subject for a mile or two and spy on his cautious efforts to escape the company and attention of his brother anglers. He is laden with his camera ready for use, and will joint his rod in the first convenient spot, getting well under way before we have reached a favorable opportunity to observe him.

We now see him in the true spirit of the re-incarnated Walton, a silent, studious, and absorbed figure, carefully and gradually moving along the stream, picturesque in his attire, his creel at his side, booted to the hips, and his rod handled with the careless ease of a master. Or, we see him at intervals, standing knee-deep or deeper, in the crystal rush and bubble of the water-way, describing an aerial arch with the end of his rod as he whips his leader to the surface of the sparkling water. Skilfully he casts his fly—cunning semblance of Nature's own—onto the soft and subtle eddies of a deep pool—that mystic retreat of the wary trout, and fascinating mirror of a thousand forms and colors, heaven-kissed into its sleepy depths through its screens of reflected bank and leaf—we see him, now intent and concentrated, gracefully swaying and bending with each fall of his fly, eager for that rise and swirl that shall stir his pulse to faster throbs as each feathery dart of the fly threatens the strain of a taut line and the birr of a singing reel!

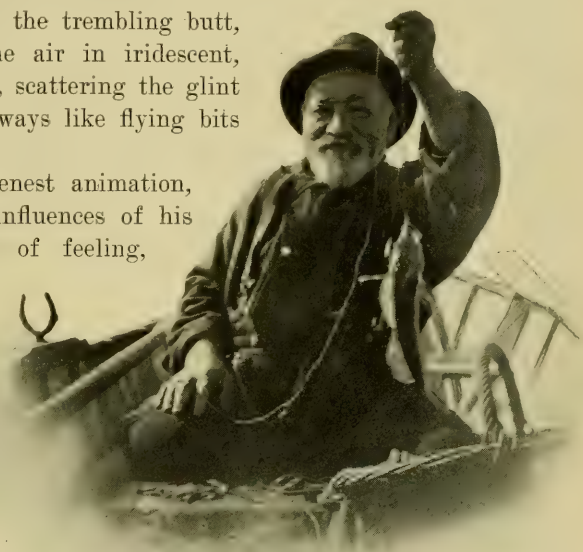
What a moment of supreme satisfaction—what joy, then, to feel the quarrel at the trembling butt, and to see his captive lash the air in iridescent, breaking flashes of molten silver, scattering the glint of drop and spray an hundred ways like flying bits of sunshine.

At this moment of the keenest animation, inspired alike by the exalting influences of his environment and those thrills of feeling, known only to the true Waltonian, who shall say, being an angler and an artist, that he is not fired by the most ardent desire to picture such a scene,—to approach, if only by suggestion, something of the vitality and pleasures of the situation?

It is the very acme of purpose for the camera—such a picture serves

us, in gouty and declining years, a source of rejuvenation, and we live over again the exciting influences of every part that it suggests. By all means and inducements take the camera where you are using the rod—this, to you, gentlemen, who have instruments and leave them behind when they should be in front of you, or you in front of them.

The most desirable conditions of success, repose, and enjoyment attaching to an expedition along a stream, are those which combine a forgotten ego in the feeling and harmonies of Nature with the conspicuous absence of man—not able to see one's self, the jarring effect of another's presence is not there to make your own felt, and, gratefully to yourself, it merges into the sublime grandeur and overwhelming absorption of all her charms—you are *alone*, an humble worshiper before her infinite problems, conscious only of being an insignificant atom in the Divine scheme. In all the human tenses that find conjugation in that sweet solitude, what one more healthful and recuperative to the jaded soul than the



softly near and distant medley of the landscape, and the laughing ripple, the sighing swirl, and petty tempests of the jeweled brook? And so we see our disciple of the genial and benign Walton reflecting in his countenance the joyous gleams of peace and happiness, which radiating from everything about him, light up his heart, like the palpitating air, with fresh life.

He is engaged where we left him, thigh-deep in the babbling waters, swaying to the casts of his fly over the insinuating depths of that emerald pool. With admirable precision he whips clear of the foliage above his head, and as surely places the leader under and around the roots and brush that find their birth in the juicy soil of the bank and trace their forms in the gay colors of the pool. We hear the repeated "swish" of the line, and with fine sympathy feel a growing excitement in those momentous, expectant pauses of the skimming fly, followed, again, by the slow, graceful drawback for the "lift"; but what is that scarcely visible thing that dangles in tortuous ways from his left hand?

We draw nearer in our curiosity, and strain our vision to detect its purpose, but it's an uncertain and a shifty thing and baffles the eye. His hand, too, in awkward poses, explains some unusual office, while we catch fleeting glimpses of the eel-like object which seems to disappear in the sparkling ripples of the stream. Then, on a sudden, like a sharp spur to our speculations, our ears are awakened into a summary solution of the mystery by the familiar click of a shutter, and, within a few feet, hidden only by some intervening shrubbery, we find the camera on its tripod, and know that its reflecting eye has taken, with us, a peep, much briefer but more enduring, perhaps, at the story of the fisher and the beauty of the scene and situation.

Thus, it was learned later that of this original effort to bring the camera into successful use under such difficult circumstances, the only trying question was the effect of this "Phantom Hand," and how to give it proper semblance of itself in the attempt to "press the button" and to "whip the fly" in concerted action.

We will leave the poetic environment of the stream, and the disciple of Walton, with their "enthusing" and picturesque impressions, and, seeking other places and conditions cultivate the acquaintance of several of another and varied class of fishers. This includes a range of interesting contrasts from the jovial and bibulous fisherman of rock-cod and perch, to the skilled and dignified exponents of the rod and reel, whose game enumerates the bonito, or "skip-jack," the yellowtail, the steelhead and quinnat salmon, the striped bass, and, those princes of leviathan sport, the leaping tuna and the silver-king, or tarpon, of the Gulf of Mexico.

The sportsman's quest of all these species of fish is principally conducted from a boat and in the rivers, bays, tributaries, and ocean waters off the coast-line.

There is a wide difference of feeling and inspiration between the environment of the trout angler and that of the salt-water fisherman, but to the photographic eye, while each vies with the other in many features of equal attraction, the latter is, perhaps, the more interesting in the unpenetrated depths of mystery and marvel where the camera would serve much valuable discovery and suggestion to scientific research. The invention of a photographic apparatus of fixed focus, that could be lowered to various depths and lighted by a powerful system of lights, and there held in suspension to picture on eight plates arranged in an octagonal box the life and gardens of the bottom, excites the imagination into a thousand fancies and promises the sober inquiries of the scientist, who labors under discouraging

difficulties in the shadows of the deep, an illuminated path of invaluable revelation. Much of the guessing and unreliable calculations and observations of the fisher concerning the habits of his game, in different localities and at various seasons of the year, would be very appreciably aided by the deductions that could be gleaned from the suggestions of the sub-aqueous negative. Such an instrument would not, of course, be designed for his use, but he would enjoy the results of it in the hands of the ichthyologist whose published instructions would lead him in the ways of knowledge and offer a useful supplement to the pursuit of his sport.

The angler's possibilities in his use of the camera from a boat under ordinary circumstances, offer, like other situations, some very happy and rare opportunities for unique illustration. Though the writer regrets the failure of several such negatives, the subjects of which will probably never occur before him again, the recital of one or two incidents, will, perhaps, in a suggestive way, point to the invaluable use of the camera where the quality of light and relative positions of subject and instrument admit any kind of a chance to attempt a picture. We have always to reckon with the difficulties that obtain in the manipulation and confinement of a boat, and the very aggravating errors in making an exposure, that are bred, alas, too often, of anxiety and of haste in securing, ere it is too late, the short-lived and rare opportunity of an original and unique subject.



Long Distance Photography Without a Telephoto Lens

Halve your doublet, is the text of an article by M. Garrigues in the *Photo-Revue*, and this is good as far as it goes, and when the extension of the camera will allow of it. Again the focal length of the single element may be lengthened by the use of a concave spectacle lens of considerable focal length, an arrangement which scarcely embodies the principle of telephotography as ordinarily understood, the high power concave and image-forming power by separation being the essential features of telephotography in the ordinary sense of the term. Such expedients as those mentioned above will ordinarily involve the use of a small stop.



Studies of Fruit Blossoms

By WILLIAM S. RICE

There is scarcely a more interesting or fascinating branch of the art photographic than that which deals with the study of old Mother Nature; and each year as spring returns with her blossoming trees, the very sight of them sets my pulses leaping, and I am seized with an irresistible desire to transfix the various dainty forms upon the limited boundary of a dry plate. And how great is the diversity of forms which they possess, with all the grace possible in shape and habit; what an infinite variety of color there is to choose from, too, in tones ranging from pure white to yellow, pink and deep red and embracing every intermediate shade and tint under the sun.

To the student of nature a fruit blossom is not like every other fruit blossom. There is something more. Every flower like every person has an individuality of its own and impresses one with a personality separate and distinct from its fellows. It may be in the poise, or it may be in the delicate gradation of its tints, or, yet again, it may be simply in the coy manner in which its petals curl back; but whatever it is, or wherever it is to be found it is this feeling that must be portrayed if anything but a stiff, wooden result is looked for.

The ideal plan of work would be to photograph the fruit blossoms just where they are found; but, unfortunately, Dame Nature places many difficulties in the way of successful accomplishment of this *modus operandi*. There is always the more or less impossible task of securing a suitable background, and then should this problem be mastered, one has still to be on guard against that ever-present enemy, the wind. A snapshot scarcely ever satisfies the student of botany; moreover, a snapshot is out of the question when a full-size picture of the original is desired; the picture should be made as nearly the full size of the original as possible, and this necessitates so long an extension of the bellows that the stop marked F/16 works in reality at an aperture of F/32, and requires about four times the exposure that would be needed if the photograph could be made from a considerable distance. Therefore, the easiest and most satisfactory way is to collect specimens for indoor photography. Gather them the night before exposing and place them in jars of water in the cellar. The stems will thus gradually fill, and they will be found to be in a much better condition to handle and less liable to wilt while making time exposures.

Indoors one may choose any kind and color of background that he wishes, this, too, is a strong argument in favor of the aforesaid method. The lighting may also be better controlled, thus producing beautiful lights and shadows giving roundness and modeling qualities so desirable to the photographer in this particular kind of subject.

As to backgrounds a variety may be used, from pure white and grays to deepest black. The cards, 22x28, used for photo or picture mats, are just the thing to use; and if one be in doubt as to the exact value that each will produce in the photograph, all he has to do is to tack up pieces of each card on a board and make an exposure of the group. Thus he can more easily make comparisons and save much perplexing guesswork.



The branches sometimes may be securely fastened in jars or bottles of cold water with the assistance of a cork; but whatever way they are grouped or posed they should be firmly secured so that during the long time exposures necessary to secure good studies, they may not sway nor settle, as did a beautiful branch of pear blossoms, leaving a blur clear across the space it traversed during the operation.



The background should be placed some distance back of the group in order that sharp, objectionable shadows shall not fall upon it. Sometimes, however, the merest suggestion of a shadow falling upon the background is not only pleasing, but lends variety to an otherwise plain surface.

The only way in which to obtain an absolutely black background necessary for some specimens is to make use of what is called for convenience, a "shadow-box." This is nothing more than a box about four feet long, with an opening at the end 3x3 feet, lined with black cloth. The subject is placed in a good light in front of the opening of the box, and the exposure is made in the usual manner. It is the same proposition as photographing objects located under a dark doorway, no light being reflected from it, the plate remains absolutely clear glass.



Experience has taught me that isochromatic, or color sensitive plates, are the best to use for this work; though, save for deep oranges, blues and purples, a color-screen or ray-filter is unnecessary. While many excellent flower photographs are obtainable with just the ordinary plates, the greens and yellows are usually false, and are never quite so satisfactory as with the former.

One thing remains to be done before making the exposure. We must see that our subject is in focus upon the ground glass. Apparently this seems an easy matter, but wait and see. You will find that when you pull out the bellows until the subject appears life size upon the ground glass that all parts of the composition, or spray, are not in focus; while one or two flowers are seen sharp and clear, others way off to one side are distressingly fuzzy or blurred. What, then, is to be done? The flowers should be arranged as nearly as possible on one plane, that is, all as nearly equally distant from the eye as possible; and then the lens stopped down until the main objects of interest stand out clear and distinct.



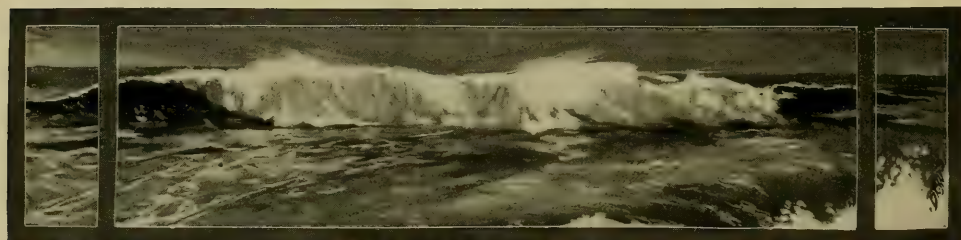
I usually find that an exposure of two and one half or three minutes, stop 62, sufficient. Then if the flowers contain colors necessitating the use of the color-screen, I expose three times as long.

Now as to suitable places for making exposures, a well-lighted basement has been found to be the most satisfactory. First, it is apt to be the coolest part of the house and, second, there is less vibration of the floor, which would be disastrous to the model during the long exposures.

Pieces of white cardboard have been found very useful at times to reflect light into shadows which would have been too dense otherwise.

One of the keenest regrets of the flower photographer is that the flowers must be pictured in monochrome, instead of their real colors; although if one be clever with the brush and colors, the prints, if made on rough paper, particularly platinum, may be tinted by hand very effectively with colors made especially for this purpose.

But, it is hoped, that the day is not far distant when color photography will be not only a dream, but a true realization.



Where the Trouble Lies

By PRESTON E. ANDERSON

The beginner in photography discovers, nine times out of ten, that "something is wrong." He is at first amply repaid for his time, trouble and expenditure by finding that he can really secure at more or less rare intervals, fairly satisfactory portrayals of the scenes at which his camera is pointed, but a little later he discovers that a good print requires a good negative and the good negatives he is somewhat in doubt about when it comes to a matter of producing them himself.

The first great drawback is his uncertainty as to the amount of exposure required by varying conditions of the factors entering into the calculation. A good exposure meter will be found a help, in fact any sort of a scale or table will assist. The great trouble is that at just that stage of his career when he most needs the power to correct in developing his errors in exposure, he has become so bewildered by floundering from one formula to another that he has really only the most vague ideas concerning this most important part of the work. One developer or rather one formula should be selected and strictly adhered to, with confidence in the fact that one formula will give as good results as another in the hands of a novice; and with the knowledge born of experience, that one particular developer will give better results in his hands than would the best developer ever compounded were it used without such knowledge of its peculiarities. If exposures are mainly of the snap-shot order it is well to start each plate or film in the normal solution and to learn to determine by the time required for the first appearance of the image, whether the plate has been over-, under-, or correctly exposed.

Once this is learned it is easy for one, particularly if development be carried out soon after the making of the exposures, to call up all the details of the exposure and in so doing one impresses upon his mind the necessity of amending, as suggested by the hint given in the development, future exposures under like conditions. Working in this way, the acquiring of the knack of what is called "intuitive timing" becomes a matter of but a short period. I really believe there is no such thing as this intuition but that it is simply a form of knowledge such as we all acquire in many directions by such imperceptible effort that we hardly credit ourselves with having studied the subject. If exposures are made with a camera used on a tripod and with a good lens fitted, timing may occasionally be rather over what is really required by a normal developer. In such cases it is well to start all exposures in a solution differing from the normal developer only in the lessening of the amount of alkali to one half. The same knowledge should be obtained as to the behavior of the plate in this developer as was recommended for the normal solution. Should the image lag in making its appearance, transferring the plate to a normal developer will generally suffice. If still tardy in coming to the front, placing the plate in a diluted solution of the alkali for a few moments and then returning it to the developer last used will, by repeating the treatment, prove about all that can be done in the way of coaxing out the image. Should the image flash up too quickly in the first or half-alkali developer, indicating over-exposure of a more pronounced type, the placing of the plate in a dilute solution of bromid of potassium will render the action slower to such a degree that on returning it to

the developer it will proceed to build up in an entirely satisfactory manner.

This matter of over-exposure brings me to another trouble, namely, fog. Most beginners use one of the cheaper forms of small ruby lamps that are hardly safe under the demands made upon its illuminating powers. The older hand who rarely raises his negative to the light for the purpose of examination and whose more practiced eye does not require the near proximity of the lamp at the early stages of development, can use such a lamp without the least fear of trouble. The beginner should either adopt these suggested precautions against bringing the negative too close and too often to the light or else secure a lamp with a larger illuminating surface and one that is more "safe." No light is perfectly harmless; it is principally a question of time and distance. It is in this fact that the methods of the older hand finds justification in clear and fogless negatives.

The question of focus is another that often causes disappointment to the beginner. Particularly is this the case when using a high-grade lens which permits of large openings, quick exposures and the consequent slight depth of focus. Not unfrequently is the focusing scale at fault. Could lenses be turned out in large quantities with exactly the same focal length it would be entirely practical to place them on cameras fitted with focusing scales all stamped out from the same die. As it is, the machine-made bit of celluloid may fit perfectly a lens on one camera and be more or less in error on another, just in proportion as the focal length of the second lens may vary from the first. It is a simple operation to test the matter and the time will be well spent. Take a piece of string or a tape line if the latter be available and tying one end to the camera front measure off the number of feet called for by the shortest distance mentioned on your scale and there tie a knot. Stick a pin through this knot and into a printed card fastened to a well-lighted wall. Raising the camera to the eye and holding it so that the string is taut the card should be in sharp focus with the lens wide open and the pointer on the indicated distance on the scale. If you have no means of focusing the camera; if it have no ground glass back, the exposure of a plate or film will be required in order to determine if the scale be right. It will often be found advisable to erase the lines on the scale with a bit of sandpaper and to substitute others made by actual trial with objects at the various distances indicated by the scale. The figures of course being allowed to remain. In using such a scale in future work it is well to remember that stopping down in order to increase the depth of focus, such depth is increased to the rear of the point for which the marker is set approximately twice as much as it is in front of that point. Another matter not given the consideration it requires is the fact that the more distant the object focused the greater the depth of focus at that point and the more increased will be the depth consequent upon any reduction of the size of the stop.

Another fruitful source of disappointment in the way of unsatisfactory negatives is the presence of some light-leaking hole in the camera. In my own earlier days I have used a camera for some months with a constant fear that just the exposures I most desired to have result in good negatives would turn out but flat and uninteresting results as they often did at that period. I could account for their doing so in no possible way. It finally occurred to me that the camera might leak light. The bellows was fully extended, the back removed and taking it out into bright sunlight and examining the interior with a focusing cloth, I found that several corners contained minute holes that allowed light to enter just enough



THOMAS
by DR. C. H. GARDNER

to softly illuminate the interior of the camera. When using a short focus lens calling for but a slight extension of the camera, fog was not produced. With the focusing cloth allowed to lie across the top of the camera there was little danger. It was on the occasions when I used a long bellows extension, removed the focusing cloth and perhaps allowed some time to elapse between the drawing of the slide and the opening of the lens, that fog resulted. A new bellows was ordered and my peace of mind restored. A shutter will occasionally fail to close perfectly, a lens board may fit so loosely that light is admitted. Only a week or two ago a beginner came to me with some negatives showing fog across one end of the plate commencing about an inch from the end. The sharp line where it started as well as the location of the streak indicated that it was light leaking in between the camera back and the camera proper. A strip of velvet ribbon glued all around the edge where the back fitted into the camera made the whole light tight. The camera was one of the better type of instruments turned out by a leading manufacturer. I mention this simply to show that trouble may arise where least expected.

A dirty lens is quite often an unsuspected cause of trouble. Particularly is this liable to be the case in the small box form of cameras. The rather inaccessible position of the lens does not invite the close examination of the surfaces which often acquire a covering of dust that renders the use of the camera most unsatisfactory. I was in a stock house recently when a gentleman came in with a camera that he said seemed to have no particular trouble except a growing disinclination to make other than foggy, flat negatives. Removing the lens disclosed the trouble, and a few rubs of a soft piece of chamois leather soon made things right. The inside of the camera should be dusted out from time to time. Dust is bound to accumulate therein, and its removal is more important than the so often advised brushing off of the plates before placing them in the holders. A little care and thought given to these matters I have outlined will locate the troubles of a number of my readers I am quite sure. I know they have proved of assistance to many who have received the same hints verbally and it is this knowledge which emboldens me to present them to you in this form.

A Sensitizing Bath for Carbon Tissue

M. Vaucamps, writing in the *Moniteur de la Photographie*, gives the following as conferring a high degree of sensitiveness to carbon tissue:

Bichromate of potassium	80	grams
Hot distilled water	1,000	c.c.
Bicarbonate of soda	2	grams
Bromid of potassium	1.5	grams

Mix in the order above stated, taking care that the bichromate of potassium is completely dissolved before the other ingredients are added. Care must be taken not to use the solution until it is quite cold.

The Advantages of the Film Pack

By CHARLES R. OGILVIE

I have awaited an inspiration that would justify me in using print, these many years. That I am capable of instructing more than a very limited number of my fellow camera enthusiasts has never inspired me to write articles on the various processes of our art-science and my experiences, though covering a great many years of enjoyable slavery to the ruby lamp, have seemed so commonplace and so innocent of material for entertaining recital that I have heretofore refrained from rushing into print. The advent of the Film Pack and the completeness with which it has so fully filled the requirements that I have so long felt were demanded for the entire enjoyment of our photographic inclinations, urges me to place before my brother amateurs an urgent appeal that they give this new and improved method of working a trial.

I feel that there are no small number of the amateurs of the country, who, like myself have felt that both the glass plate and the roll film have their limitations, their drawbacks and their own peculiar and individual disadvantages, that while not present in both, necessitated a choice which did not permit of full gratification of one's desires. With a glass plate outfit one could compose the view upon the ground glass, could assure himself that the focus was just such that would give the desired amount of definition and no more; could be sure at all times that there was no undesired amputation of some important part and even could, from the appearance of the image, form a fairly good idea of the required exposure after a little experience. To secure this, the lightness, compactness and portability of the roll film had to be sacrificed. These latter advantages secured and plates avoided, dependence had to be placed upon the finder, too often a most unsatisfactory adviser, even in the simple matter of the amount of subject included. The focusing to secure that aerial perspective we have all learned is so important in the major portion of our work, becomes at once a matter of pure speculation. There is little wonder that so ill fitted a remedy for this state of affairs as the cut film with its adapters found such unmerited popularity, even as a partial ameliorator of the disadvantage.

The advent of the daylight film simply gave that form of carrier for our sensitive surface one more element of superiority. The plate still held its place for serious work. The placing upon the market of the Film Pack leaves nothing to be desired. It combines at once and in the most simple form all the benefits of compactness, lightness and daylight loading with the further boon of exact focusing, in fact, the employment of the ground glass as a means of composing the view to the best advantage, the determination of the exposure by the appearance of the image thereon and the determination of the amount of swing best suited to the rendition of each particular subject which may call for the use of this important adjunct to our cameras.

That the securing of these gains does not require the alteration of our present cameras, much less the purchase of new instruments is a most gratifying feature

of the Film Pack's claim to popularity. All that is required is an adapter to convert any ordinary plate camera into an instrument that has all of the advantages of the plate using instrument for which it was intended, with all the convenience of a film using camera. With one of these inexpensive adapters, which simply takes the place of his six or a dozen holders, and with a Film Pack or possibly two, the amateur rids himself of the weight and bulk of the holders while retaining all the helps which have in the past so endeared to him this unnecessary load. The loading of the adapter with a pack of twelve films will be found to be even a simpler performance than the loading of a single holder, not taking into consideration the fact that daylight loading is one of the advantages secured. The adapter with its films in place is as easily inserted and withdrawn as an ordinary plate-holder, in fact the insertion of the same protecting slide admits of the operation of removing the pack and focusing as often and with the same facility as when the ordinary plate-holder is employed. Still further, the worker may desire, for some particular subject, to employ one of the special plates deemed more suitable in that particular instance. The adapter is removed, and the regular plate-holder carrying the desired plate inserted and employed in making the exposure with the same degree of ease as if only plates contained in the ordinary holders were being used.

I have given these Film Packs a most rigid and severe test and found them all that the makers claim for them. The films are made by the Eastman Company and are practically the same as the popular N. C. films which do not curl in development. There can be no question as to the good quality of the emulsion with which they are coated. My own experience has led me to prefer them for all work in which a freedom from halation might prove advantageous. I have further found that much of this discussion relative to their speed can be easily explained by the fact that they are orthochromatic to a no small degree. Used in bright and actinic sunlight they are perhaps not so rapid as the most sensitive plates. These latter too often sacrifice other important features in the securing of a great speed. Used in a dull or yellow light, the speed of these films will prove most remarkable. This is due entirely to their particular sensitiveness to yellow. Under these conditions they prove themselves most rapid and it will be found that this added rapidity comes as an available aid at just the time when its assistance is most required. Great speed in the emulsion is rarely needed under full sunlight and a blue sky. It is during those periods of the day when the light is more yellow and less actinic that we desire to profit by all the speed that the emulsion is capable of giving us. This good feature of the Film Pack article, coupled with all the latitude and fine gradation which the excessively rapid plate is so prone to withhold, makes all discussion on this point seem but trifling to the worker who has once given their relative merits a thorough trial.

If, in adding the weight of my testimony to the claims of other and more gifted writers, I shall have induced a few of my brother amateurs to cast aside their doubts and make the small investment required to allow them to give the Film Pack a thorough trial, I shall feel myself well repaid for my momentary departure from the reader's position to that of the writer's. I am also convinced that there is only a portion of thanks, unmixed with any suspicion of insincerity awaiting me from such of my readers as may take my advice.



MISS E
by W. E. DASSONVILLE

Copying

L. E. Haynes, speaking on this subject before the last meeting of the South Essex Camera Club, said, after he had introduced the subject by referring to the difficulties that the ordinary amateur had to overcome in copying; that he intended to show how to produce an exact facsimile of the original. A copying board was essential, and one was shown which was easily made and inexpensive. It was essential to have a copying board so as to keep the parallelism between the copy and the camera. A rectilinear lens was advised for the work, but it was shown that copies the same size could be made with even a fixed focus box camera. The camera ought to have a double extension, and to have the plate rack back, and not the lens rack forward. A medium plate was recommended for ordinary subjects, but for line work a process plate was best. To focus properly a card ruled with parallel lines was advised. In some subjects it was difficult to know when exact focus was obtained, so that if the card were focused first then absolute focus was assured. Next came the most important factor in success—namely, the exposure. Copying out of doors by daylight, or copying by artificial light was advised. It was important that the copy should be evenly illuminated. The best stop to use was $f/16$. In daylight it was best to use an actinometer; calculate the exposure required for a portrait out of doors, and give four times this. This would be correct for copying same size. For copying by artificial light magnesium ribbon was better than gas, oil, or electric light, as the intensity of the light did not vary. It was shown that eighteen inches of magnesium ribbon burnt on each side of the copy at a distance of three feet two inches, gave a good copy, stop $f/16$ being used. Weak development was advised, as that gave detail first, and density could be stopped where required.



DOG CART

BY WENDELL G. CORTHELL

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX

SAN FRANCISCO, CALIFORNIA, AUGUST, 1904

No. 3

Who is to Blame?

While CAMERA CRAFT has always avoided taking part in the all too time and space-consuming argument as to the guilt or innocence of the amateur as a competitor of the professional, it has held its firm conviction that the real cause for serious complaint was much more evidently located in an entirely different direction. An incident coming under the Editor's notice very recently is evidence in point. A new hostelry in this city required a few hundred pictures to be used as advertisement. A leading photographer was consulted, several negatives were made and one selected as most satisfactory. A price was asked to be made on several hundred bromid enlargements, 30x40, mounted. A sample was submitted on Royal Bromid and a price of two dollars and forty cents quoted in hundred lots. Before negotiations were completed another photographer secures a negative, submits a sample on paper manufactured by himself and offers to fill the contract at one dollar each. The original bidder not being in a position to meet the lower price, loses the work. The story does not end here by any means. The original bidder is called upon by the representative of a Chicago concern and plainly told that he has a lot to learn about bidding on such work; that said firm stood ready to deliver them the work for fifty-six cents each. Remember, gentlemen, this is for 30x40 bromid enlargements, mounted. Can we imagine one of the much-dreaded amateurs making any such price? Can we imagine his work being much inferior to productions offered at such a figure? Will you kindly allow the amateur pass?

That International Salon Congress

While little has been said on the subject, CAMERA CRAFT has not relaxed its efforts to secure the endorsement of those whose influence will most materially assist in making possible the realization of the plan proposed by Mons. Demachy some months ago. That the promises of hearty co-operation have been most gratifying only fulfils the natural expectations where so clearly advantageous a proposition is offered for consideration. The matter is mentioned simply that there may be no doubt as to our continued effort as well as to our increased confidence in the early consummation of the desired result.

Evidence of Appreciation

That CAMERA CRAFT has been furnishing its readers with matter of value as well as a most interesting collection of photographic literature from month to month hardly requires mention. The fact that its name is so often quoted in the leading foreign publications is good evidence to its editor that his efforts have not been entirely lacking in securing a measure of that success for which he has aimed. The last issue of *Photography*, London; a publication itself noted for its ability to secure a large share of original and valuable matter, contained in the single issue three separate mentions of CAMERA CRAFT, quoting from the words of its Editor or regular contributors. Before CAMERA CRAFT entered the field it was a most uncommon occurrence to find an American publication quoted in those on the other side, while clippings from the foreign publications filled the major portion of our own. A change has taken place which I am glad to chronicle.

A Predestined Success

Milton Waide, of "One Man Method" fame, who has favored CAMERA CRAFT with so many valuable contributions to the literature of the craft, is soon to launch a perfected system of teaching his methods to professional and amateur photographers by means of personal exchange of work with criticisms and suggestions, carried on through the medium of the mails. Mr. Waide has spent several months in perfecting this system and has fully demonstrated its entire practicability and value by applying it to the instructions given some of his pupils in towns suburban to New York. Home portraiture by an ordinary window, such as he has so successfully taught to many New York amateurs, will be made a feature of the amateur course. The rates will be modest and a prospectus will soon be ready for mailing.

A Large Enlargement

In one of our largest department stores there hangs an enlargement thirty feet long, made from a film negative four feet six inches in length. It is a panoramic picture, the production of which necessitated the employment of special machinery, special not only as to size but of an entirely new form of construction, both as to the camera employed and the production of the enlargement. When it is understood that the size of the picture was limited only by the ability of the manufacturers to produce the bromid paper in a single sheet, the claims of the gentleman who has so distinguished himself that enlargements up to three hundred feet in length are a possibility, become less trying to the credulity. Julian A. Bried, to whom we are indebted for this monster picture, has well merited the success which has crowned his efforts by his month of application and untiring devotion to the working out of his ideas. In an early issue CAMERA CRAFT hopes to present to its readers a full and detailed description of the methods employed which are at present unavailable; protective patents having been applied for on such devices as render the production of work so lacking in the coarseness so common to enlargements, possible.

Club Notes

News Items From the California Camera Club

By C. A. Goe

Demonstration

On Tuesday evening, June 21st, Mr. Gamble, the well-known artist, delivered a lecture to the Club on the subject of composition, criticizing the lantern-slides as they were thrown on the screen. The slides were of unusual merit, from the photographic standpoint, but Mr. Gamble demonstrated that from the painter's view many of them were sadly lacking in artistic value.

Mr. Gamble's remarks will undoubtedly result in great benefit to the one hundred Club members who were in attendance, and from the close attention given every portion of his talk I doubt if Mr. Gamble will have any adverse criticisms to make upon any of the future work turned out by them.

During the evening President Coombs made a few remarks upon Club work, reviewing the work of each committee, the successes and failures, and pointed out wherein each member could lend his aid to those who are daily working for the Club's interest.

At the close of the Demonstration the Entertainment Committee took charge of the rooms, and slides were shown from the following members of the Interchange: Portland Camera Club, Photographic Society of Philadelphia, Photographic Section of the Hartford Scientific Society, Columoia Camera Club, Philadelphia; Los Angeles Camera Club, New Britain Camera Club, Toronto Camera Club, Hamilton, Ontario, Scientific Association and the Photographic Society of Vancouver.

Club-Room Improvements

The recent addition of so many new members to the Club has resulted in more or less discomfort in the matter of facilities for work, which caused the Board of Directors to secure additional space. The room adjoining the work-room is now being fitted up with washing boxes for both negatives and

prints, new lockers and such other necessary equipment as the increased membership demands. Under the direction of Mr. Hoyt the club-rooms have undergone many changes and alterations, and the Club members have only words of commendation for the able manner in which he has conducted affairs for the House Committee.

Monthly Exhibition at the Alhambra Theater

The Alhambra theater was filled to its capacity at the last Camera Club Exhibition; in fact it became necessary to close the doors and turn many away who were anxious to hear Mr. Erwin in his lecture on "California and Its Metropolis." It was the eve of Mr. Erwin's departure for St. Louis, where he is to deliver daily lectures in the San Francisco Building at the Louisiana Purchase Exposition. From the fact that many of the moving pictures were being shown for the first time, particularly those of the San Francisco Fire Department, the greatest interest was manifested on the part of all who were able to secure invitations. Of the two hundred views exhibited a large number of them were contributed by our members and while Mr. Erwin is delivering his lectures to people of all nations and telling them of California, and our own City in particular, he will not for a moment overlook the California Camera Club and when the Fair is ended we will be known the world over. Without a doubt our Club is the only one which has been given a headquarters, for in the San Francisco Building is a room known as the "California Camera Club Room" where over a hundred views of this city, contributed by our members, are being exhibited.

At the present time we are well represented in St. Louis by the members of the Camera Club St. Louis Outing, which left the city during the latter half of June.



BY W. E. DASSONVILLE

TWILIGHT

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

A Plate Backing

One of my friends has been experimenting with the various mixtures recommended for the backing of plates. He has spoiled a goodly number of holders and wasted a few dollars, not to mention much time. He has finally settled on a mixture of lamp-black and gum arabic. He measures it out with an old spoon; two of the lampblack to one of the gum arabic of the stationery store and then adds enough water to make it the desired consistency to work up nicely with an old thin knife-blade used as a spatula. When it is thoroughly mixed it is put into an old tin box-lid and allowed to harden into a cake. A wet rag is used to apply it to the plates and from results I have seen it is certainly a most effective preventive of halation. It is the easiest thing in the world to rub it off just before developing and only the thinnest coating is required. Beware of any backing containing glycerin, as it will draw enough moisture from a damp atmosphere to ruin slides containing plates so backed.

Far Fields

You all know the old adage about far fields. I think it applies to photographers more than to any other class of men. The man who lives in the South is of the impression that if he only had the chances that his Northern brother enjoys what fine snow scenes he would make. The Northern worker bewails his lack of the advantages his more fortunate brother of the South thinks of so little use. And so it goes. Is there really any part of this land of ours that will not furnish material that could not be exhausted in an average lifetime? I had a correspondent down on the edge of Death Valley a few years ago. I certainly thought he had good reason to complain. He sent me a few views

that were entirely lacking in interest on account of their uniform portrayal of nothing but stretches of red sand. Within a month of their receipt a lecture on the locality was given in a local hall. A set of the most interesting lantern-slides it has been my good fortune to see for a long time, were shown. A little inquiry disclosed the fact that they were all made within twenty miles of my friend who was so convinced that his locality possessed absolutely no opportunities for the use of a camera. It is all our lack of appreciation. We see a street scene made in some foreign country and we imagine we only need the same quaint surroundings and we would do wonders. Will not the streets of our own town or city furnish the same groupings, the same opportunities for good composition and the same element of human interest? The one thing lacking is an appreciative eye for these things that are all about us, and a mistaken impression that it is owing to any particular localization of the scene that gives it value.

Packing Exposed Plates

An amateur friend from the East was out here a few weeks ago and of course I took him over the ground. He photographed all the principal points of interest, and in two or three cases included your humble servant gracefully posed in the foreground. Prints were of course promised, and they came last week. One had a faint lettering across it saying, "case has been held over pending investigation," and the other had one of these finger impressions they are now using to identify criminals, neatly printed just at the side of my picture. I did not feel like eating much dinner that evening. A ring at the door-bell seemed to annoy me more than usual, and despite the light dinner my sleep was rather troubled. It all cleared up the next day. It seems that in putting

the exposed plates back in the boxes he faced them all one way and wrapped them in newspaper. The result was that moist, warm fingers left a mark on the cool, glass side of one plate to be transferred to the film side of the next and printing-ink coming in contact with the surface of the top plate in each bundle, had made its mark thereon. I would have expected better judgment to have been displayed by an amateur of his knowledge, but it seems he had the lesson to learn. I mention it that others returning plates to their boxes for future development may not make the same mistake. Pack the plates face to face as the manufacturer does and if you fear they may shift about and chafe, fill in the spaces at the sides with strips of soft blotting-paper or cotton-wool. All cheap paper contains hypo, and printer's ink contains chemicals injurious. The strong odor given off by some printed matter when removed from its wrappers should suggest that much.

About Home Portraiture

Few of our readers but have profited by the writings of Frank Morris Steadman in the pages of *CAMERA CRAFT*. He has recently had published from the press of the Eastman Kodak Company a small book entitled "Home Portraiture." To say that the book is destined to do a great deal of good in popularizing this branch of work which has heretofore required so much skill and experience to insure good results, is putting it very mildly. The matter of exposure is all made so simple that failure in that direction is out of the question and the other details are as fully explained as it is possible with examples reproduced and diagrams furnished. The little book should be epoch-making in the photographic career of any of my readers who will follow its clear and lucid explanation of the method advised. The plan is made specially applicable to users of the simpler types of hand-cameras, but with any outfit it is equally valuable. I have made several negatives according to the instructions laid down; in some details going directly opposite to my own judgment in the matter, but found that the book was right as the negatives were developed. Ask your dealer for a copy and you will find yourself making a few less landscapes and a good many more pictures of a class more pleasing and more worthy of your camera.

Pinholes

A gentleman came to me the other day with a lens that had been found lacking and which it was desired to replace by something better. I could not find out just what the lens lacked and so borrowed an old camera from a dealer, one that the lens would fit, and gave it a trial. But that is another story. I went into the dark room of a friend to fill the holder and finding he had one of the right kind already loaded, took that. The two negatives I made were literally peppered with fine pinholes. The friend of whom I borrowed the loaded holder has a reputation for the cleanness of his negatives. The trouble came from the inside of the camera which I found later was actually covered with a thin layer of dust. Right on top of this experience came a letter from a correspondent saying he was going to quit a certain brand of most excellent plates because they were full of pinholes. He knew it must be the fault of the plates because he was careful to dust them well before placing in the holders and again before developing. I have just written him that there are other ways of getting dust on the plate than by carrying it in in filling the holders. The camera should be fully extended and the bellows wiped out with a damp cloth. The best way to do this is to spill a little glycerin here and there on a soft piece of rag and then hang it in a warm place for a few hours to allow it to become uniformly saturated. The dust will adhere to a rag so prepared and you will be surprised at the amount that it will collect from the inside of your camera.

Working at the Exposition

The local stock-houses are all getting rolls of films from their customers who are at St. Louis taking advantage of the free use of their cameras on the grounds of the Louisiana Purchase Exposition. All the exposures are overtimed, in some cases so much so that it is impossible to secure good negatives from them. Our readers who contemplate using their cameras at the Fair should remember that white buildings require about one fourth the exposure of ordinary street scenes. Another thing that should be remembered is the fact that a street scene hedged in by tall and closely arranged buildings of a more or less dark color is an entirely different proposition from such street scenes

as are at their disposal at the Exposition. Even the time that one is accustomed to give to fairly open landscapes will be found too long, for the simple reason that green foliage is rather non-actinic and does not reflect light on near-by objects, while white buildings act much as does the white reflector the photographer draws up near his sitter in order to lighten up the shadow side of the face. Cut your exposures down at least one half and you will be doing better work and have the thanks of the man who develops your films.

Hypo is Cheap

Of course this is nothing new but at the same time there is not one amateur in ten that realizes the fact. If it were worth about ten times what it really is there would still be no excuse for the sparing use made of it by so many of us. Again, perhaps it is not the desire to save money so much as a dislike of the trouble of mixing it up that prevents our using it as liberally as we should. Another reason is our ignorance of the importance of a fresh solution. An ordinary fixing bath rapidly becomes charged with a combined salt composed of the silver reduced out and the hypo which unites with it in the process. So charged, the bath has a decomposing effect upon the film and works imperfectly in eliminating the unreduced silver. The result is slow action, foggy looking negatives and a mushy, structureless film that is hard to dry and liable to develop pinholes and other defects in doing so. A fresh bath gives clearer results, has a hardening effect on the film which dries rapidly with a good, smooth, hard surface. The best way to avoid the temptation to use the old bath is always to have a good supply of a saturated solution of the hypo salt on hand. Keep a large bottle or an old earthenware teapot full of this saturated solution. This is easily done by simply seeing that it is kept full of water with undissolved crystals at the bottom. When a fixing bath of the ordinary strength is required it is only necessary to pour out a certain amount and add an equal bulk of water. A saturated solution of hypo is practically a one-in-two solution and adding an equal bulk of water gives one the regular one-in-four of the formula sheet. By following this plan we also avoid the slow fixing incident upon using a freshly made bath which owing to its ice-cold condition, caused by dissolving the salt, works

very slowly until it has been given time to come to the temperature of the atmosphere.

A New Paper

Some time ago I was favored with a sample of the new Aristo self-toning mat. I did not mention it in the last issue because I wanted to give it a trial. I can now speak with some confidence and although I can hardly find words exactly to express my surprise at the simplicity of the working and beauty of the results, I can at least advise you all to give it a trial. It is a collodion paper and gives results much superior to those secured on a gelatin paper. The makers sent me with the sample a print made on paper three months old, and while I flatter myself that I made some very nice prints the one sent is a pretty high standard to try to equal. It is this point of good keeping quality that should strongly appeal to the amateur who does not always find it possible to use his paper while perfectly fresh. This advantage coupled with the beauty of results and ease of working should make the paper immensely popular at once. It has the regular Aristo Platino surface and gives tones that are gratifying to even those who are so partial to carbon effects.

Cleveland Camera Club

On the evening of June 8th the above Club was entertained by D. G. Krouse in an illustrated lecture of "A Night in Japan."

Print Exhibition

During the month of June the California Camera Club walls were occupied by a number of W. E. Dassonville's meritorious portraits and landscapes. Mr. Sewell has contributed a valuable collection of prints, which are now on exhibition at the Club, where they will remain until the end of July.

Minneapolis Camera Club

The Twelfth Annual Outing of the Minneapolis Camera Club was held on Decoration Day at Marine Mills, the oldest town in the State, having been founded in 1824.

Over two hundred members of the Club attended and report a most enjoyable day of picture making and fishing in the St. Croix River, on which this interesting old town of Marine Mills is situated.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Exposure Time in Portraiture

Some months ago I gave an excerpt from a paper advocating prolonged exposure on the ground that the drillmaster's "attention" expression was not so likely to be present and had in fact time to soften down into a "stand at ease." The writer cited some daguerreotypes as exemplifying his argument, and I, myself, have been favorably impressed with my own long exposure results in lamp-light and also in pinhole photography. Recently an editorial in the *British Journal of Photography* gave the case for quick exposures. I am not at all inclined to believe that all of the arguments in this latter are tenable, but some are worthy of serious consideration, and workers should be posted on both sides of the question, and intelligently use one or the other procedure according to circumstances. The leading argument for rapid exposures is not badly put as follows:

"When we gaze admiringly at a landscape, we do not see it in perfect rest; however still the air or constant the light, there is bound to be a swift succession of hardly perceptible changes which prevent our eyes from tiring of the scene. We cannot show this in a photograph, nor can the artist in a painting. We can only watch carefully for one suitable instant when everything satisfies our eyes, and try as best we can to preserve this happy moment on our sensitive film, so that the beholder who sees our picture may enjoy a portion at least of our own pleasure in the original. It follows, logically enough, that as we can only portray the landscape as it appears for a fraction of time, and as also the photograph so produced must make its destined effect on the mind of the beholder in much the same brief

interval, that the long exposure is, in theory at least, undesirable."

This is followed by an argument that inasmuch as rapid work demands greater skill and more careful technique, it leads *by practice* to better results. A doubtful kind of argument as it may tend "in practice" to quite other results. More valid is the statement that "it can hardly be denied that it will certainly promote the exercise of a faculty of instant decision." Few qualities could be of greater value in the pursuit of the camera craft. The man who fumbles and hesitates is heavily handicapped. It will take him perhaps half a day, and many failures, to secure the same result that his quicker and more decisive colleague will obtain in a few minutes. This has been strikingly illustrated of late years in high-class portraiture. The methods of working of most of our best operators, as compared with the slow, experimental dawdle of the past, afford a striking and instructive contrast. Finally the writer well says a quick exposure does not necessarily mean an under-exposure:

"The latter is the one great bane and curse of the photographer's existence. It ought in the majority of cases to be quite possible by wise choice of time or place, adaptation of lighting, and employment of rapid plates and lenses of large aperture, to give a minimum exposure. It need not be an instantaneous one; it is only attempted to suggest that it should be the shortest possible under the circumstances. But no matter what these may be, it must be a full and sufficient exposure, calculated to give a negative of satisfactory and truthful gradation."

The Farmer Reducer, Its Composition and Use

Dr. G. Stubenberg, under the above title in *La Revue Suisse*, gives a very valuable article as the results of careful investigation and extended experiments made with a view of demonstrating the fact that, rightly employed, the Farmer reducer was not only a valuable reducer under varying requirements, but as a means of modifying the character of the negative it has a power little understood. Passing over this preliminary, I quote: "It is known that Farmer's bath consists of a mixture of two solutions, viz., of a solution of hyposulphite of sodium (hypo) and of a solution of ferricyanid of potassium (red prussiate of potash). The formula generally given is as follows: 'Add to a bath of hyposulphite of soda a solution of ferricyanid of potassium until the bath becomes a straw color.'"

This direction is so incomplete that it is absolutely impossible to work with any degree of certainty upon such a basis. If we want to be always sure of our results we must know: First. The effect of the different components of the mixture, and second, the proportion in the mixture of the different components to obtain the desired results.

The strength and the quantity of the hyposulphite solution are of great importance. The more we add of this solution the greater is the general action of the reducer upon the whole extent of the picture, while the more we add of the ferricyanid of potassium the greater is the attack of the reducer upon the half-tones. To work with certainty and to ensure that the reducer will not too energetically attack the negatives placed in it, it is absolutely necessary that the solutions shall not be too strong. The degree of concentration that has been found best is one to twenty. The state of the bath, whether neutral, alkaline, or acid, has been found to have a great influence upon its action. I have found that the reducing action is considerably moderated if to the solution of hypo we add a certain quantity of carbonate of soda. The more we add of carbonate, the more moderate is the action of the reducer. Thus we can have a reducer which acts equally upon the whole picture. The action of the ferricyanid is probably diminished by the sodium carbonate. The yellow stain, which is often seen on a negative if it is left too long in the reducing bath, is prevented by the carbonate.

The action of the acid Farmer reducer is striking. If we prepare a mixture of the two solutions (hypo and ferricyanid of potassium) and if we add to 100 cubic centimeters of the bath 10 c.c. of acetic acid, we get a reducer which works very evenly, almost the same as the alkaline reducer, only that its action is slower. The half-tones are well preserved and the veiled parts of the negative—the lights—become very transparent. No precipitation of sulphur has been observed.

For practical use I recommend the following formulas:

SOLUTION I. (NEUTRAL)

Water, sufficient for1,000 c.c.
Hypo 50 grams

SOLUTION II (ALKALINE)

Water, sufficient for1,000 c.c.
Hypo 50 grams
Carbonate of soda 10 grams

SOLUTION III

Water, sufficient for1,000 c.c.
Ferricyanid of potassium... 25 grams

As for the acid reducer it is better to prepare this only at the time of using, in order that it should not decompose.

A. Negatives (on glass or paper). First. For the general reduction of negatives that are too dense. Second. For the clearing of negatives that are fogged, or veiled, through over-exposure, or over-development, or from the use of a developer which has not been correctly composed. Third. Modifying the character of a negative by first reducing it and afterward intensifying it.

B. Positives on paper. First. For the general reduction of over-developed bromid prints and enlargements. Second. For clearing prints and enlargements that have become gray, or fogged from over-exposure or over-development. Third. To modify the character of a print by reducing it first and then intensifying it, either with salts of mercury, of gold, or of platinum. Fourth. For local reduction by applying the solution with a brush.

The composition of the reducer depends upon the particular case. For A. 1 and B. 1 we employ a mixture of 100 c.c. of solution II and 5 c.c. of solution III. The negative is laid in water so as to wet it equally all over; it is then placed in the reducer and left there until the desired effect is obtained, and finally it is well washed. For A. 2 and

A. 3 we use solution I, and the quantity of solution III to be added depends upon the degree of clearing desired. For A. 3 it should be observed that, by a suitable addition of solution III we can get effects which it will be impossible to obtain by any other method. We commence with a bath composed of 100 c.c. of solution I and 10 c.c. of solution III. After soaking the negative in water we plunge it into the above solution and, if the effect be not sufficient, we add a few drops of solution III. By this means we can get rid of every trace of fog.

It is possible, by a direct method, to produce negatives differing much from their original character. This method has considerable value, especially where it is necessary to produce a negative for printing, by a process for which it could not be used in its original state. If we wish to modify a negative that is too dense and prints very slowly, in order that it should print quicker and with more vigor, we use 100 c.c. of solution II (alkaline) and 5 c.c. of solution III. Leave the negative in this bath until it has become perfectly transparent in the shadows. If this treatment makes it too transparent in the lights, intensify it, either with a uranium intensifier in two solutions (very vigorous) or by intensification with gold, or with chlorid of mercury (a weaker intensification). By the first method the plate, which is well washed, is bleached in a five per cent solution of ferri-cyanid of potassium (solution III). After washing the negative it is placed in a one per cent solution of chlorid of uranium until the required degree of intensification is reached; then washed and dried.

When using the second method—intensifying with gold—treat the negative with

Water, sufficient for	1,000 c.c.
Chlorid of mercury	20 grams .
Sal ammoniac	50 grams
Hydrochloric acid (pure) ..	8 c.c.

The image disappears in this solution, and after washing is treated with a bath of gold as follows:

Water, sufficient for	500 c.c.
Sulphocyanid of ammonium ..	10 grams
Solution of chlorid of gold	
(one per cent)	30 c.c.

As soon as the image shows the desired vigor, wash the negative and dry it. It

happens sometimes that the shadows of a negative treated in this way are still not sufficiently transparent; either the action of the reducer has not been continued long enough, or it did not contain enough of solution III, but this can be easily corrected by applying a bath composed of 50 c.c. of solution I and 10 c.c. of solution III. The negative is kept in this bath until it becomes perfectly transparent, after which it is thoroughly washed.

For prints on bromid paper the treatment is the same as that for negatives, but it must be remembered that the coating of sensitive emulsion on the paper (except in the case of paper negatives) is much lighter than that on plates and, in consequence, the bath should be modified accordingly. The reducer made up the same as for plates should have twice, or three times the volume of water added to it.

A Photographic Grader at the Royal Photographic Society

Photography, in reporting a paper read by Howard Farmer at the Royal Photographic Society, quotes him as saying: Although a negative might be satisfactory in all other respects it would be unsuitable for enlarging purposes if the scale of gradation was greater than the sensitive paper in use would accommodate. The range of gradation in bromid paper was from white to black as one to sixteen, in P.O.P. as from one to sixty-four, and in the carbon process as from one to 256. If in enlarging on bromid paper the negative has a greater range than one to sixteen, either the lower or the upper end of the scale would have to be sacrificed, and variations in exposure simply shifted the loss from one end of the scale to the other.

As the result of experiments made at the Polytechnic, a contrivance which (to avoid the use of the word "screen" applied in many other directions) he called a "grader" has been devised. It was made by placing an ordinary dry plate in close contact with a half-tone process screen in the camera and making the exposure through a very small stop.

The plate when developed was covered with a multitude of minute opaque dots, and served as a negative from which any number of "graders" might be made by printing upon other dry plates.

Notes and Comment

For sometime past there has been a demand from the amateurs for a matt surface self-toning paper, a paper that requires the simple manipulation of Aristo Self-toning gloss paper, but with the surface of Aristo Platino. To meet this demand we are now making the Aristo Matt Self-toning paper.

We are sending you by prepaid express a few sample prints on this new paper, which we are sure your amateur friends will be particularly interested in, if the matter is properly brought to their notice; we are also sending with above prints a quantity of advertising folders relating to this new paper. The Matt is worked exactly the same as the gloss Self-toning, requiring only a salt wash and a hypo bath. This Matt Self-toning is distinctly an amateur paper and we intend to introduce it only among amateurs. Tones can be produced on this new brand, ranging from a red to a rich purple.

Although the manipulation of the Matt Self-toning is very simple, the results are uniform, and when the paper is properly handled we guarantee the prints as permanent as our other collodion products.

The Matt Self-toning is sold at the same price as the regular gloss Self-toning which has been on the market for the last four years.

We trust that your amateur trade will recognize the merits of this new Matt paper, and that we will soon be favored with an order for same.

AMERICAN ARISTOTYPE CO.

The amateur in first starting out to experiment with the camera or kodak seldom realizes that he has started on the road which may lead to one of the most dignified and pleasant as well as lucrative of the professions. The photographic field is broader and less crowded, the opportunities for advancement greater than can be found elsewhere.

Until within a few years it has been necessary for the person who desired to enter the profession to begin in some third-rate gallery and devote the greater part of his time to the drudgery of the place. He did

not receive the instruction that he so much desired but found it advisable to pick up whatever he could, and the proprietor would tell him enough so that he would be able to do the work desired. It was necessary for the apprentice to trudge along in this manner for at least a couple of years before he had acquired sufficient information to go out and earn anything at all. Practically he gained his meager knowledge of photography from observation, as he received no instruction.

Today everything is different, the photographic school has at last made its appearance; the person ambitious to take up the profession does not have to follow in the path of others, who at best seldom learned more than one branch of the dozen, and thus were unfitted to do proper work.

The people of this coast are exceptionally fortunate in having a thorough and modern institution which is located in one of the largest of western college towns.

The California College of Photography, which was established the first part of this year, is situated at Palo Alto, the city of the Leland Stanford University, thirty miles south of San Francisco. No better place in all this country could have been chosen, for from Stanford University instructors have been secured in art, chemistry, and optics that it would have been impossible to get in other places. As photography is founded on these three sciences they should by all means be brought into photographic courses.

The person of average education can complete the course and obtain his diploma in nine months; certainly a great change from the time required to learn just one branch a few years ago.

The greatly extended use of photography in many branches of science, education and commerce will demand many workmen to each one now employed. New fields are opening up for the photographer every day. The government has placed them in all the scientific and agricultural departments. Half-tones are rapidly taking the place of pen-and-ink drawings. Advertisers are placing great numbers of photographers in their illustrating departments. The large dailies

and the weekly and monthly magazines are steadily increasing their staffs of photographic artists.

Photography of today offers greater advantages than any other profession, and we are glad to see this opening for the young people as well as those advanced in life to learn this art in a thorough and practical manner.

On another page will be found the advertisement of the California College of Photography, it will pay you to look into their methods.

Their Fall Announcement, also a picture of their new building will be sent upon request and should you desire to make further inquiries, President A. S. Dudley will gladly furnish you with the desired information.

The time is fast approaching for the Fourth Annual Convention of the Photographers' Association of the Pacific Northwest, which meets at Tacoma, Washington, September 21st, 22d, 23d, and 24th. Can you afford to miss this opportunity of meeting all the leading photographers of the Northwest? You can see their work and also the work of all the best Eastern photographers. The dealers will also be on hand to show you all that is latest in printing and developing papers and the plate manufacturers will give us practical demonstrations under the sky-light. There will be no prizes offered. You are invited to send some of your work for exhibition. There will be continuous demonstrations every morning in aristo platino, carbon platinum, velox, etc. This will all be free to members. All will meet at the Convention as students, study all the best works, learn all we can from the demonstrations, and go home full of ambition to do better work. Attend the Convention; it will do you good.

The Bausch & Lomb Optical Company, Rochester, New York, has just placed on the market the new Zeiss lens—Tessar f-6.3. According to the business arrangements between this large American Company and the firm of Carl Zeiss of Jena, the Rochester factory is now turning out this new objective in large quantities after the original formula of the inventor, Dr. P. Rudolph, and employing the new Jena glass recently discovered and now manufactured especially for the Tessar series. Bausch & Lomb, having completed the arrangements necessary for the production of this new lens, have announced

their ability to give immediate attention to all orders. Literature descriptive of Tessar may be had from photo dealers throughout the country or upon request from the Company's office at Rochester, or the various branch offices.

From the fact that this new objective is a result, both of the most recent optical computations of a member of the famous Zeiss staff of scientific experts, and likewise of the newest optical glasses, it is a somewhat difficult matter to describe its merits adequately.

Tessar construction is simple compared with that of some of the other Bausch & Lomb-Zeiss series. It is an unsymmetrical doublet of four thin lenses, the rear pair cemented, the front uncemented. Through the successful application of the formula and the character of the new glass, the manufacturers have produced a lens of remarkable light-gathering and light-transmitting power. The separation between the lenses is ample for the fitting of the Volute or Iris Diaphragm shutter.

Tessar works at a speed of f-6.3, which is sufficiently rapid for all instantaneous work. The great quality of the lens, however, is that this rapidity is combined with perfect definition over a field of wide angular extent. The image is uniformly and precisely clear and sharp from the center to the margin of the plate. Tessar is adapted to hand-camera work, portraiture, groups, landscapes, industrial and reproductive photography, copying, enlarging and projection. For amateur use its compactness and moderate price are two great recommendations, but its chief claim to a place of dignity and importance among the highest grade photographic lenses will be found to lie in the fact that where uncommon requirements of instantaneous and professional photography are met with, Tessar's ability to produce the most perfect results is not to be questioned.

The Second Annual Convention of Photographers' Association of California will be held in the Mechanics' Pavilion, San Francisco, October 26th, 27th, and 28th. The Convention Committee promises an educational meeting and has already arranged to secure the best talent in the country for its demonstrations. CAMERA CRAFT hopes to be in a position to publish a complete program of the Convention in the next issue of the Magazine.

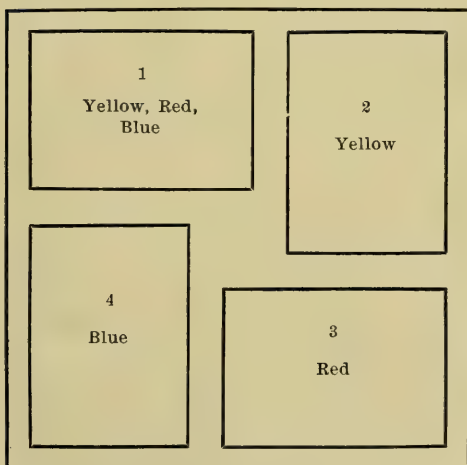
With the Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Proving Three-Color Half-Tones

Here is a method of proving three-color half-tones that I have just tried with satisfactory results. It enables the printer to see with absolute accuracy just what yellow, what red and what blue make the completed print. They are all on the one sheet and can be matched perfectly. At the same time they save the pressman the trouble and worry of marking the shades on his proofs. Of course, it can be said that there is a little paper wasted, but I think this is more than compensated for. The following diagram will explain what I mean:



Cut the paper square, and of a size to make four prints from the cut to be proved. Make the yellow impression in the place marked "No. 1." Turn the sheet around and make a second yellow impression in the place marked "No. 2." Both of these will be exactly alike if the press is properly inked up. On the red make one impression on top of the yellow at No. 1. Turn the sheet

around and make a second red impression at the place marked "No. 3." Repeat this for the blue and there will be a completed three-color picture and also a proof of the three colors that compose it.

Half-Tones from Oil Paintings

The photo-engraver is often asked to make a half-tone from an oil painting and in most cases has to either "turn the job down" or make a botch of it. Then he puts forth his powers of argument to convince the customer that it's "the best that can be done." But there is no gain in this method of doing business. Do the job right and make the man pay for it or don't do it at all. Should a customer ask you to make a half-tone directly from an oil painting at the ordinary price, don't do it, as only dissatisfaction will result in nine cases out of ten. A good half-tone from an oil painting can be made in only one way. Make a photographic copy of the painting on an isochromatic plate through a color filter. This, of course, adds a couple of dollars to even a small job. To photograph an oil painting the aim is to get only the general effect of the picture. If too dense a screen is used, too much of the yellow will come white and the blue will be abnormally dark. I have gotten the best results by using a Cramer, medium isochromatic plate and a lemon-yellow color screen. I give full exposure and develop with a soft developer. This prevents "plugging" of the high lights which should never be in a copy of an oil painting. Any oil painting can be photographed to yield a perfect tone and values about as they appear to the eye. In some pictures it will be impossible to get certain reds as they should be, but this is of no importance as long as the difference between yellow and blue is

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

114 Geary Street, San Francisco

Entered at the Post Office in San Francisco as second-class mail matter

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If you have anything to sell or to exchange try this department. Somewhere among the thousands of CAMERA CRAFT readers there are sure to be several who will be glad to correspond with you. In many cases CAMERA CRAFT can guarantee the reliability of the advertiser and will do so upon request. Otherwise the magazine assumes no responsibility. One insertion free to all seeking employment. Fifteen cents a line, eight lines \$1. Cash must accompany advertisement.

Wanted—Expert retoucher would like the work of a few more city or country galleries. Regular prices. Address A. C. Marquardsen, 109 Capp Street, San Francisco, Cal.

Situation Wanted—As general assistant in studio in California; good, competent workman. Samples of work and references sent. Address Carrie B. Prescott, Lake City, Minn., P. O. box No. 345.

For Sale—Photograph studio in Portland. This place has never been without patronage, and has cleared \$3,000 yearly for the past three years. Sickness the only reason for selling. Price, \$1,200. Address "Sinbad," care of Blumauer, Frank Drug Co., Portland, Oregon.

Two hundred and fifty-six unmounted views of the Philippines; size 5x7; no two alike; packed in case ready to mail, \$3. J. D. Givins, photographer, 2026 Green St., San Francisco, Cal.

Amateurs—Send for Bernham's Border Masks. New designs, 4x5 size now ready. Price, 25 cents. Milbern Mfg. Co., 334 Dearborn street, Chicago.

Lenses for Sale—Will sell my new No. 7 10x12 plastigmat and a No. 5 6½x8½ of the same make for \$150, or will sell either one separately. Guaranteed to be in perfect condition. Have quit viewling. Address Post Box 597, Sacramento, Cal.

33 1-3 per cent discount on 1904 cameras. Send stamp for greatest bargain list yet published; 20 to 60 per cent saved on supplies. Broadway Camera Exchange, 621 Broadway, New York.

25 per cent saved—Studio in Pasadena, Cal. The millionaires' play-ground, worth \$2,000, for sale for \$1,500. Business paying and prices good, but I must get out doors. Full particulars if you address L. George Thompson, Pasadena, Cal.

For Sale—Half interest in a platinum Photo Studio, in one of the principal towns in Northern California. Enquire at 303 Jessie Street, San Francisco.

Wanted—Want to buy a good second-hand air brush; must be cheap and in good condition. Address Yosemite, care of CAMERA CRAFT, San Francisco, Cal.

CAMERA CRAFTY



Price 10 Cents

San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CAL.



ALVIN LANGDON COBURN
by W. E. DASSONVILLE

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX

SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1904

No. 4

Monster Enlargements by a New Method

In asking Mr. Bried for a detailed statement of the particulars connected with the production of the picture which recently called forth so much comment, CAMERA CRAFT met with a most hearty response. All available information was placed at the Editor's disposal. At the earliest possible moment permissible, full working details and drawings will be given us for publication. These will be presented to our readers in a later issue, but it might be well to state that the illustration now given of the camera is not an absolutely correct picture of the instrument as used, or to be used in future work. To secure that protection which is as necessary as it is justifiable, exhaustive search of patent records is requisite, necessitating a delay in giving full publicity to the details.

Little more than a year ago, three young men came together to establish a commercial photographic printing establishment. These were Wilfred E. Smith, operator for Thors studio; Richard A. Towers, head printer in the same establishment, and Julien A. Bried, a mechanical and photographic experimentalist. The Towers Company was formed. The range of their capabilities covering as it did every form of photographic printing, as well as the high quality of their work, early gave them the business of the coast. The popularity of bromid prints, the high favor which the process was accorded in the best studios, both for contact printing and enlargements, convinced them that but a few years were required in which to see this process used exclusively by the leading workers. Another significant trend was observed. The demand for very large work (enlargements), was found to be far in excess of the capabilities of the average producer. Particularly the advertisers who used such work had discovered that the power of a large picture to secure and hold attention, quality of course being equal, was in an ever-increasing ratio to the superficial area of the photograph presented to their attention. As the value of an enlargement ten feet in length exceeded that of a ten-inch photograph, so does a thirty-foot enlargement multiply the value of the same picture far in excess of its multiple of the surface.

The loss of sharp definition resultant from great enlargement in the ordinary way as well as the difficulty and expense found necessary in the production of satisfactory work by any method of vignetting together the results of several negatives while enlarging, not to mention a third process calling for the use of several enlarged negatives and their combining on printing-out paper, convinced these gentlemen that an entirely different method was needed.

The production of an enlargement, eight feet in height from a 5x8 negative, made with all the care and all the skill that could be brought to bear upon the ordinary method of working, convinced them that there was a well-defined limit



THE SUBJECT EMPLOYED IN MAKING

This small reproduction of the thirty-foot enlargement does little more than suggest the opposite side of the bay are clearly defined. The small parallelogram enclosed in a of image secured with the great magnification required in enlarging from is simply perfect, but the fineness of detail is

long past midnight. The camera was soon completed, and their energy and enthusiasm were rewarded with success if not a very finished piece of mechanism. The camera employs a film seven inches in width and of any length. It is of the revolving type, turning upon a pivot at the same time that the sensitive surface of the film is drawn past a small slot at the focal plane of the lens. Any part of a circle can be embraced as well as one or more complete circles if desired. Of course such application of the revolving principle is not new, but in the camera devised, that heretofore unconquered difficulty, vibration, has been overcome. In all previous attempts to apply this method of working, vibration has resulted in negatives entirely unsatisfactory for great enlargement.

In this new camera, the film travels at a speed of from twenty to eighty inches per second. A complete circle requires a film six feet in length. Vibration is entirely overcome, and the resultant negatives are as sharp and well illuminated from end to end as the center of the best negative taken in the ordinary way upon a stationary glass plate. Some score or more of negatives embracing every class of subjects, have been made and all are most perfect. The one herewith reproduced was enlarged upon the largest obtainable sheet of paper, and measured three feet five inches by thirty feet. It was displayed to the public in one of the local retail establishments for a few weeks, and is now on exhibition in Honolulu to be returned later.

The first large print was made and developed in a somewhat crude manner. Our illustration shows the print being rocked in the tray. About forty gallons of developer were required. Machinery has been designed and in the near future, developing, washing and drying will be done entirely by machinery. The actual cost of producing the first big print was more than \$200.00, although several times that amount was expended in the preliminary experimenting. The interest of G. A. Turner, one of our prominent real estate men and himself a photographer of no mean ability, was early enlisted by the inventors and several thousand

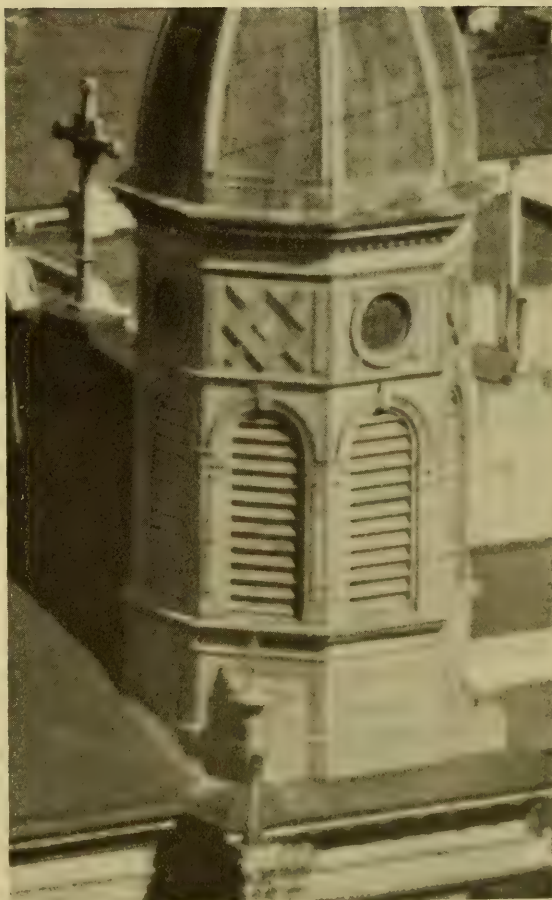


THE THIRTY-FOOT ENLARGEMENT

capabilities of the method. In the original, buildings on the Marin County shore on the white line is shown exact size in the cut below; demonstrating the wonderful sharpness the sixty-inch film up to the thirty-foot picture. The quality of the negative only appreciated when enlargement is undertaken.

dollars were placed at their disposal with which to carry on the work. A company has been formed to exploit the work made possible by the new method. It will be known as the American Panoramic Photo Company, with offices at 312 Montgomery Street, this city. The members of the firm are: G. A. Turner, president and manager; Bruce Cornwall of the law firm of Monroe & Cornwall, and Messrs. Towers, Smith and Bried. Plenty of means are at their disposal and success is assured. The regular work will consist of prints up to fifty feet in length, although orders for work up to one hundred and fifty feet in length will be undertaken on special orders. As explained, full detailed drawings will be given CAMERA CRAFT readers at the earliest possible moment.

Before leaving the subject it might be well to explain that enlargements produced by this



method have nothing in common, other than size, with the large panoramic pictures produced by photographic means from time to time in this and foreign countries. Enlargements made from several negatives vignetted together and printed on a continuous strip of paper are lacking in that uniformity of perspective which characterizes so strongly the work produced by the newer method employed by Mr. Bried and his associates. Even in the production of the smaller sizes easily within the capabilities of the ordinary appliances the superiority of the new method readily asserts itself by reason of the fine definition, uniform illumination and other good qualities secured by reason of the peculiar construction of the apparatus which employs only the central portion of the field covered by the lens. Not alone is this



the case in making the negative but in again using the good offices of an objective in producing the enlarged image upon the bromid paper.

Another great advantage possessed by this new method is the practical elimination of all risk of failure and consequent diminution of loss of time and material. Fully equipped machinery will not only insure correct and continuous uniformity of exposure in enlarging upon the bromid paper, but developing, fixing, washing, and drying will all be done automatically by machines capable of producing results more satisfactory than by any method of hand manipulation and in a much more rapid manner; in fact, the process has in its favor that element so often lacking in newly devised methods—entire practicability.

The Rod and the Camera

By OSMOND WILTHEW

SECOND PAPER



IN the accompanying photograph, entitled, "Gaffing Leopard Shark," is illustrated, in part, an incident that occurred in the Elk Horn Slough, California. During the last hour of an ebb-tide, and as the sloping banks of mud were gradually laid bare by the receding water, the writer and his companions, in an anchored boat, were, for some minutes, puzzled to define at some distance down the slough the sudden appearance of what seemed like an army of propeller-blades protruding above the water-line, serrate and scattered, and having a wobbly action as it clouded the shallow flats with the red tint of the mud. We watched its slow approach and after a short interval we found it to be the dorsal fins of a shoal of leopard sharks. They appeared to be digging their noses in the mud, and were evidently bent on some object, the purpose of which we were unable to determine.

Here was a curious sight and one immediately inviting to the camera.

The backs of the fish were now well in view as they approached the boat, and failing to make them take bait we promptly resolved to try conclusions with our gaffs. They passed, or, rather, half swam half wriggled close to the boat and seemed unaware of it, for many rammed their noses against its sides and then felt their way around it. To use the popular phrase, "it was a picnic" with the gaffs, amidst much scrambling and splashing of water all over ourselves and the boat.

The writer made several exposures on what was really the unique feature of the situation: the advance of the shoal with its hundreds of dorsal fins standing out of the water, with here and there, a strip of spotted back and an occasional swirl of the water where a big fellow would whip his tail. But the negatives proved unintelligible. An expanse of water dotted all over with dark blotches and a distant edge of bank-line completed the picture. A little more deliberation of resources, and very likely, the result had been a success. It was possible to have stepped out of the boat in boots, and deliberately gaffing a large shark and stranding it in still shallower water, to have composed it against an immediate background of fins and distance and to have accomplished with three or four exposures one or more good negatives of the character and spirit of the incident. The quality of the light and other conditions were favorable, and the nature of the situation afforded ample time; but, too late, the thought came to the writer through the evening chat of the day's performances and the soothing puffs of a sweet brier. The incident serves, very aptly, to emphasize the necessity of infinite pains and ingenuity to compass the possession of rare and original pictures under difficult circumstances.

Salt-water fishing presents certain elements of zest which are absent on the stream. Here, we are mainly affected by the prevailing sense of peace and poetic languor, whereas on the open waters of bay or ocean, we are attended by the impressions of mighty forces which induce a pleasing sense of stirring adventure and possible danger.

The writer, however, much deplores the awkward moment when, suddenly precipitated into a very trying and awfully wet situation, the camera was not immediately in good working order to convey to the sympathies and imagination of his friends and the public the very realistic recognition of what is so easily described in dry clothes and a comfortable lodging, as, "the sense of stirring adventure and possible danger."

A well-known angler, and a skilled hand with the camera, was out one day under sail trolling for quinnat salmon in Monterey Bay. It was a season of unusual winds and heavy weather, but the salmon were running in large numbers and big size. The

firmed spirit of the to be resisted, and, the services of a pro-his boat in order to There are times the pressing character makes one slur the prudence, and disposes things that should suggest undesirable contingencies. The anecdote had selected additional feeling of by reputation, and a competent and vet-sailed the waters of thirty years, and had fellows one of the most boatmen in pursuit of was not so large nor of model peculiar to the probably, desirable perienced hand. It was suasion, too, that our into some show of in-out, for, as a matter

in that frame of mind and feeling of body which much desired to complete the last, lingering hours of a thick lethargy in the sensuous fuddles of what is popularly and aptly defined as "a hold-over." In short, Michael had rather—much rather—have dwelt in his reactive exhilaration and dreamed again of the daring exploits which had bandied his name on the tongues of men and made it a terror to the whale. And in a manner of bravado, funny in the hearing of others, Michael always accented his bibulous contemplations, or their recital, by the emphatic boast that he had executed many deeds on narrow chances and with hair-breadth escapes, and, yet, withal, couldn't swim a stroke!

It was under these circumstances, then, that all was got ready; and everything properly stowed, Michael slipped the moorings of the "Archangel" and put to sea. There was quite a fleet out engaged in fishing for salmon, dotting its white and parti-colored sails over the breaking crests and swells of the bay.



temptation to a con-fishing type was not forthwith, he engaged fessional fisherman and exploit his luck.

when enthusiasm or of uncommon chances finer considerations of an easy indifference to gestic the likelihood of cies. The hero of our his boatman with that esteem that is induced which described him as eran salt who had Monterey Bay for been accounted by his skilled and daring of the whale. His boat the usual double-bow salmon fishermen, but, enough under his ex-not without some per-angler induced him elination to take him of fact, Michael was



A RUSSIAN RIVER STEELHEAD
DEPUTY STATE FISH AND GAME
COMMISSIONER M. L. CROSS

As an experienced angler should be, ours was equipped with the most approved rods and reels well calculated to meet all possible conclusions with such a gamester as the quinnat salmon; and he had not forgotten a hand-camera of the first make and convenience in the pleasing prospect of recording the largest fish of the season, and any interesting incidents connected with the trip.

The "Archangel" heeled over, exerting a certain sympathetic harmony with Michael's feelings, and had not gone long to the full temper of the elements when the first strike brought a warning yell to the Irishman, who slacked away the sail and let the boat swing to the tension of the fisher's line. She pitched and rolled, ducking her nose and gunwales under the curling edges of the swell, Michael, a bit dreamy, watching with uncertain and querulous eye the sway of the boom, while the angler, forgetful of all else, rejoiced in the merry tune of his reel.

The quick succession of strikes had reached the eighth fish, and the ninth salmon had been brought to gaff. Michael, at the tiller with the sheet close-hauled and on the starboard tack, had been keeping the boat on short legs for quite a spell, and, as it seemed, getting away from the locality of the fishing.

"Oh, Mike!" hailed the angler, from his seat in the stern, "Get about—I guess we've quit the tracks of that school!"

"Oi, sorr," replied Michael, who at that moment, with the boom-line made fast, bending low in the boat, was straining to catch a light in his black cuddy.

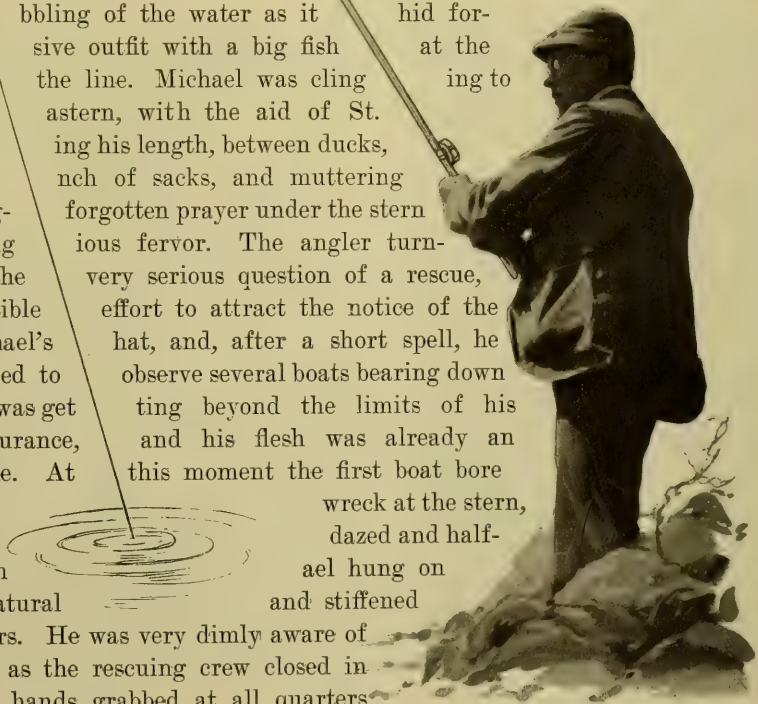
The order to turn about had been barely uttered by the angler, when his lure was hard-struck by a vigorous fish, and to Michael, he promptly called to slack away the wing. The latter raised his head with a jerk on the call from the fisher, and a sudden gust lifting his hat started to take it over the port bow. Michael scrambled for it, the boat sheered a bit, and turning over to port, a violent puff of wind caught her stiff and square on the starboard beam, filling her fastened sail and causing her to turn turtle quicker than a somersault.

It is at such moments, gentle readers of CAMERA CRAFT, that we would turn with haste and ineffable emotions to our beloved cameras, so well prepared for these heroic incidents, if it were not for the clumsy nature of the situation. It does seem so disappointing to all our well-laid plans and sincere intentions, that we cannot carry the former to a Providential hearing and arrange for a safe and convenient series of tableaux for the exercise of the camera, in pleasing contradiction of natural laws, on these critical and impressive occasions. Fancy the exciting effect that a truthful portrayal of such an event through the eye of a camera would produce on the imagination—consider the variety of pictorial suggestion that would appeal to every sort of feeling, as, in this instance, from the humorous wails of terror-stricken Michael to the presence of mind and determined conduct of a plucky angler.

Our fisher rose to the surface with all his wits well about him, and, still holding to the rod, whose reel would birr by jerks, struck out for the boat which was keel up and not far distant. As he drew the first breath he was roughly seized by the collar of his sweater, and the repeated and sobby appeals to the Almighty proclaimed the terror of the crazed Michael, who choked and gasped for mercy and salvation. The angler supposing the great whale-hunter capable of his own help, jabbed him a penetrating dig in the ribs; but Michael never grabbed a whale-line with half the strength that closed his fingers on the folds of that sweater. The struggled continued, while the angler steadily urged every atom of his power in the

direction of the boat, Michael still hanging to him and vociferating, between gulps of water, piteous calls upon the aid of Heaven.

The angler was heavily clad, and the only thing of which he was relieved was his hat, but that of Michael had stuck close jammed over his ears like the paralyzed look of fear that spread over his face. At length they neared the boat by the stern, and Michael made a mighty jostling on to her keel followed by the fisher, but this was too much for the boat, and she dipped herself and load under the water. Michael hung on to the "Archangel," listening for the call-bells of the Resurrection, but stayed fast by the stern. The weight off, the boat floated again as before and the angler, lifting Michael's hat from his head, made his way to the bow, the rod still in his grip. The reel had ceased to click for most of the line had been drawn from its spool, and, possibly, the captive salmon was contemplating from a distance, the plight of his human tyrants and their unwilling invasion of his native element as the retribution of just desserts. Accommodating his gradually exhausting body at the bow by leaning against it and resting his arms by turn over the keel-board, he first considered the very undesirable possibility of a tangle between the lace-hooks of his boots and the long and spreading bights and their sweep of his spent tackle. So, with bitter regrets, he concluded to abandon his fine rigging—this decision was the more distressing because of the effort he had made to save it. Moreover, under the increasing pressure of the circumstances, it was getting to be a burden too irksome to sustain. With a last, affectionate look and a feeble squeeze of the handle in his benumbed hand, he threw it from him, catching a glimpse of the splash and bubbling of the water as it hid forever an expensive outfit with a big fish at the other end of the line. Michael was clinging to the keel-board astern, with the aid of St. Patrick, measuring his length, between ducks, like a floating bunch of sacks, and muttering fragments of long-forgotten prayer under the stern-necessity of religious fervor. The angler turning, then, to the very serious question of a rescue, made every possible effort to attract the notice of the fleet with Michael's hat, and, after a short spell, he was much relieved to observe several boats bearing down upon him. He was getting beyond the limits of his strength and endurance, and his flesh was already an ominous purple. At this moment the first boat bore down upon the wreck at the stern, where the much-dazed and half-unconscious Michael hung on only by a supernatural grip of his fingers. He was very dimly aware of what was doing as the rescuing crew closed in on him and all hands grabbed at all quarters.



and dragged him aboard. The angler was not so soon nor so well approached. Another boat in the wake of the first sailed past him, and an awkward hand cast a line both ends free to the bow of the wreck. Its coils lighted near him, and taking hold of them he turned to look for the other end; but what was not in his hand was under water. The boat then tacked about, and making a better approach came within a few strokes of the "Archangel," when seizing a second line that was thrown him, he struck out from the wreck and was hauled on board. His first moments of reaction may be readily conceived; his face and hands looking the color of purple ink, he nearly collapsed, notwithstanding copious and frequent drafts of liquor. It was hours before his nerves responded to the least energies of the will.

Michael, after much punching and rubbing, and the endless pouring of whisky down its accustomed passage, was restored, in a measure, and returned to the bleak shores of his home on Monterey Bay. But he was very noticeably silent concerning certain things that happened on board the "Archangel," and not even in his bibulous reflections does he allude to the moment when he needed a light in his black cuddy. A wave of remarkable modesty also overtook Michael's feelings toward his patron, the angler, and with a very becoming show of silence omitted to ask him for the hire of the boat.

This perilous situation lasted for a full half hour, and the valuable fishing rigs and camera of the angler, not to mention the fish, were consigned to the bottom of the bay—the deplorable reflection of the writer is, that the camera in that position, and without the tripod, too, was of no avail to picture it at any time, nor was he in the fortunate attitude of a rescuer to use his own instrument and to congratulate his esteemed friend on a very narrow escape.



THE CASTLE

BY WENDELL G. CORTHELL

An Automatic Shutter-Release for Ten Cents

By BERNARD C. ROLOFF

No doubt many of the amateurs who read this have seen various automatic shutter-releases advertised in the photographic magazines, costing from \$1.50 to \$2.50. These little devices have their uses but few of us care to invest this amount of money for one of them.

The following description and accompanying sketches will enable any one to make an ingenious device of this nature for himself, far better in fact than any to be had on the market, at a cost not to exceed ten cents.

The sketch, Figure 1, shows a tube four and one-half or five inches in length, quite thin, and of about one-half inch inside diameter. It is preferable to have it made of steel or aluminum, but if this cannot be procured, other metal will do, or even a glass tube of approximately this length and bore will serve the purpose. If made of metal a piece of gas tube turned down quite thin will be just the thing. The lower end *a* should be closed. If you determine to use glass, a glass bottle without a neck will do admirably, and saves plugging one end. Do not have the glass too thick, and the inside must be smooth its whole length. No matter what kind of a tube is used a rubber cork or a wooden plug the exact size of the interior should be forced tightly into the same as shown at *b*, about one third or probably one fourth of the length of the tube down. Be careful about breaking the tube if glass is used. Before inserting the plug, which by the way need only be about three eighths of an inch thick, cut a very small notch into the same. See Figure 2.

Now the tube is divided into two compartments, *c* and *d*. Into the upper compartment pour about one and one-half ounces of clean mercury. Before closing up the upper end of the tube provide a piece of strong wire three or four inches in length, not easily bent, and after turning a short part of one end, as shown in Figure 3, so as to catch into the plug, insert the plug with the wire, leaving two or three inches protruding.

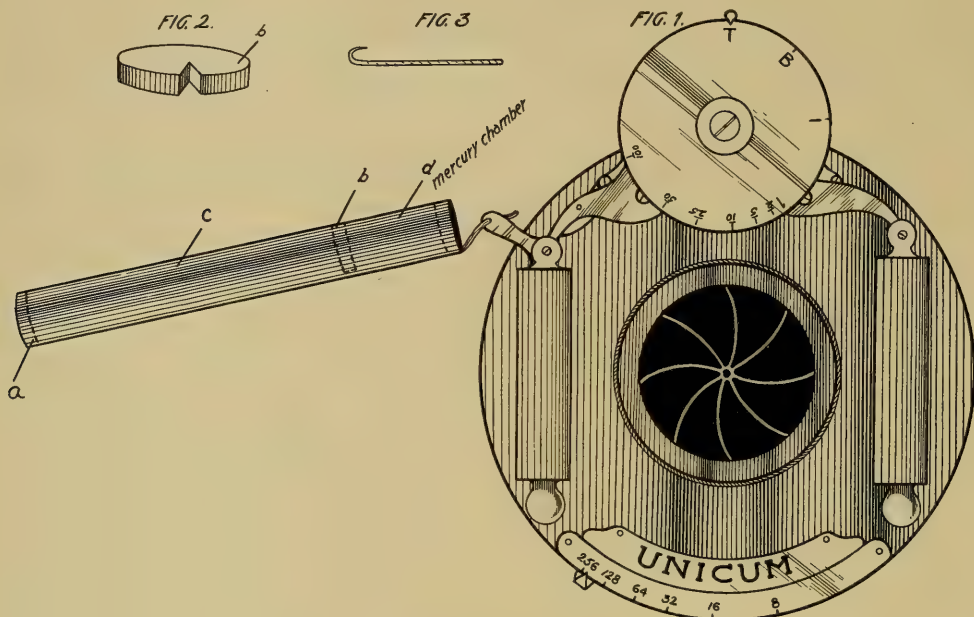
Now, if you are using a Unicum shutter it is only necessary to insert the end of the wire into the hole in the finger-release of the shutter, set the same and await developments. The mercury will drop into the lower compartment until that end becomes heavy enough to draw down the finger-release and operate the shutter. Unless the spring of your shutter be unusually strong it will work like a charm. If the spring be too strong the upper plug should be taken out again and more mercury poured in. To return the mercury to the upper chamber it is only necessary to carry the device in your vest pocket, upper end down, and it will soon return to place.

Should you have a shutter not having a hole through the finger-release it might be well to drill one through, or have it done for a few cents, or if that be too much trouble, then the wire protruding from the shutter-tripper may be bent so as to catch the finger-release in some way, so that the tube will hang from the finger-release at a slight angle, as shown in Figure 1. It is easily done.

Now supposing that you wish to take a landscape with yourself posing in the foreground, it is only necessary to arrange your camera as you want it, set the

shutter, attach the release and immediately take your position. Wait until you hear the shutter click, then walk back to the camera and remove the tripper.

By changing the size of the opening cut in the inside plug or varying the amount of mercury in the tube, or both, the length of time it takes to operate



the shutter can be easily changed. Time the device when finished and remember how long it takes. From ten to fifteen seconds is long enough for most purposes, but that is at the option of the maker.

The writer will soon have the above tripper on the market to sell at a small price, including attachments enabling the user to vary the time at will.

Reversal in Cases of Under-Exposure

A note by M. Guéhard, which touches on several controversial points (*Bulletin of the French Photographic Society*, 1st April issue, 1904, p. 189), discusses the question whether the reversed images occasionally obtained after extremely short exposures are not in reality of a nature similar to that red fog which so often attacks under-exposed plates, and which is so notably prominent on the clear parts of the negative. In the case of one particular make of French development paper it was found that when a diamidophenol developer was used the coloration of the whites was always the first phase noticed, this giving a negative effect by reflected light, this negative effect passing through citron to orange, red, chocolate, and brown, but the development of the true positive image soon masks this effect. Still when the preliminary positive is formed, there must almost inevitably be a softening of the resulting print. Quite apart from all questions of theoretical interest it might be a matter of practical importance to keep watch for any preliminary reversed effect when testing plates or paper; although it by no means follows that an early element of reversal must of necessity be objectionable in all cases.

A Chain of Salons

By WALTER ZIMMERMAN

The title is a taking one. The idea is still better, and the possibilities which the suggestion gives for artistic photography are beyond any one man's words at the present moment. Several men thought of the same thing at about the same time. Monsieur Demachy of Paris was first, in point of time, and, while Mr. Clute was writing in *CAMERA CRAFT* of the Demachy idea, the writer was making the suggestion to Mr. Clute, and to others, naming it as above and proposing further details. It is the outgrowth of opposing propositions. First, that salon exhibitions of picture-photography are good things for the cultivation of photography as a fine art. Second, that there are many disappointments and needless expenses connected with exhibitions, both with the exhibition committees and the exhibitors themselves. These propositions have been very fully written up, but a few words are needed to convey the right meaning of the suggestions now being made.

First-class picture-photographic exhibitions are helpful to the public, to the worker and to the exhibitor. To the public they are educational; to the worker, helpful and instructive; to the exhibitor they are necessary in order that he may gain the true appreciation or depreciation of his own work. The day of "monstrosities" masquerading as art is over, or nearly so. The low tones for sunlight pictures, the bolting-cloth atrocities and similar freaks have had their day; and even gum things, which are frequently artistic, are no longer believed to be necessarily so, just because they are gum. In this day of the renaissance of sanity in art-photography, the need of frequency and regularity in art exhibitions of photography is greater than ever.

On the other hand, the difficulties in the way of the exhibition committee and the would-be exhibitor have become greater than ever. Some annual exhibitions have been dropped. Recent ones have not shown the strength of purpose or success that they should. What is the reason? There are two causes, timidity and lack of concurrence, which apply equally to the committee and to the picture-maker. I will touch lightly upon the first of these. There has been a much-paraded association, with a distinctly un-American name, which is thought by very many to be a great, big bugaboo. "If we were to act upon our own responsibility, the Bugaboo Society will not send its last century prints for our exhibition." "If I send *my* things to this exhibition, the Bugaboo Society will not invite *me* to be a member, and will not invite *me* to hang with it." It is the appeal to the "*me*" and the "*my*" which has told with so many people. If the people who have said and thought this will but forget the *me* and the *my* and the Bugaboo Society, and will remember and work for the *cause*, artistic photography, their efforts will result in good that will be far better and far greater for themselves and for others. For my part, I would rather forget the Bugaboo Society entirely, and rather not have to write of it at all, except that it comes right up—in the arguments of many people who think more of self than of principle—in the questions apropos of holding a series of salons in the large cities from Maine to California, with the exhibitors in one exhibiting in all. Argument is not needed to convince the reader of the



importance of this new movement, since the proposition speaks for itself. Difficulties have to be overcome, and many details are to be worked out. The plans cannot be laid in a moment. Those who labor in this field are laboring for their love of the art. The great difficulty has been apathy or passivity. Nothing is more disheartening. Now, where does the "chain of salons" come in, with all these statements of present conditions?

Take the exhibitor: There are in this country about six hundred people who have had their work "hung" in the various more important salons of the present century. Those who have offered their work once, have had it then excluded, and, through disappointment have never tried again, would probably make a list several times as great. And yet this first exclusion was perhaps on account of some small defect, the printing paper, the mount, the frame, or something which

inquiry as to the cause and one or two repetitions of effort would remedy. Many of the very artistic workers in the country remain unknown, considering themselves to be "non-elects." Many who have the knack of passing the juries refrain from sending work on account of the expense and doubt of acceptance. It is a long reach from San Francisco to New York and vice versa. It is not only that freight charges are heavy, and the more convenient express more expensive still, but the frames are for so long a time away while they might be wanted for something near home.

Here is precisely where the "chain of salons" steps in. It will be opened with an exhibition of surpassing merit, in a large city, with a strong committee, and with jurors of the highest knowledge and influence. The work selected at that exhibition will be hung, without variation, at another large city, and the show will be repeated from place to place until the season is over and the work is distributed. The exhibitor will have something worth sending, something justifying his best efforts. He will have his accepted work hung at three, four or ten or more art-exhibitions, and will have but one bill of charges to pay in sending to the first place, and another in returning the work from the last place. Better still, for those

who do not have to think of the expense, there will be no conflicting dates. The exhibitors send their pictures, and the committees do the rest. The exhibitors get their catalogues from the successive shows, and sales of the best pictures are announced by the respective societies.

Exhibitors will either prepare one or more copies, ready to send promptly to each committee which informs him of a sale (and these copies may be sent by mail, the committee duplicating the framing), or he may decline to sell. Sales are desirable from every standpoint. They lighten the cost of exhibition photography, they show the appreciation of the visitors, and the commissions aid the exhibition. The buyer knows that his is not the only print from the negative. If it were, he would, in many cases, have to pay many times the price. The cost of a single print from a famous negative, with the assurance that it is unique, would place photographic prices much higher than average prices for brush and pencil work. It is alone the possibility of duplication which keeps photography in art low priced. This verges upon digression, but it is an important suggestion.

Your second question is: What shall be done with our local talent, which we wish to have "in our midst" and which has neglected to send to the original exhibition? The remedy is easy. Let the local jury examine and hang the local work, but hang it separately, keeping the main exhibition intact. There may be and there may not be odious comparisons, but it is comparison and competition in art which stimulate and educate.

Your third question is: I suppose that, for "old times' sake," we want to get a chance to see the time-worn exhibit of the Bugaboo Society; will that conflict with your plan in any way? By no means. The aforesaid society will willingly send on its collection (a little frayed and dog-eared, perhaps), and that, too, should be hung separately. Besides, many museums have antiquarian and freak departments.

If you ask a fifth question, whether the aforesaid society will get cross at you and will not invite you to play with them in case you send in your work for the "chain of salons," I shall have to ask



you once more to forget your personal vanities, and to work for the good of the cause, and in the end, you will be the gainer as well as those who gain by appreciating your work. Besides, there is a new national society which is quietly showing great strength, and which is conducted on liberal and unselfish principles. This society aims more at bringing out the talent of others than at self-laudation, and it will not neglect any thoroughly artistic picture-photographer who will let himself or herself become known to it.



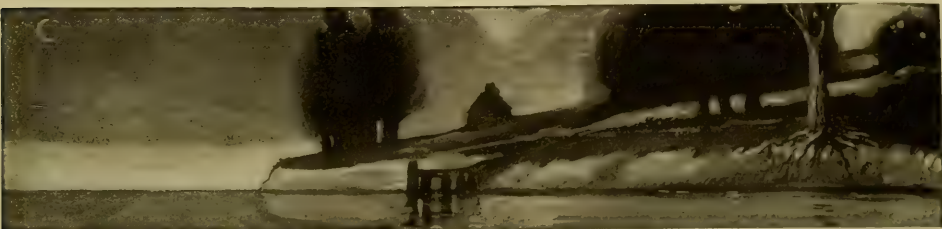
HOME AGAIN

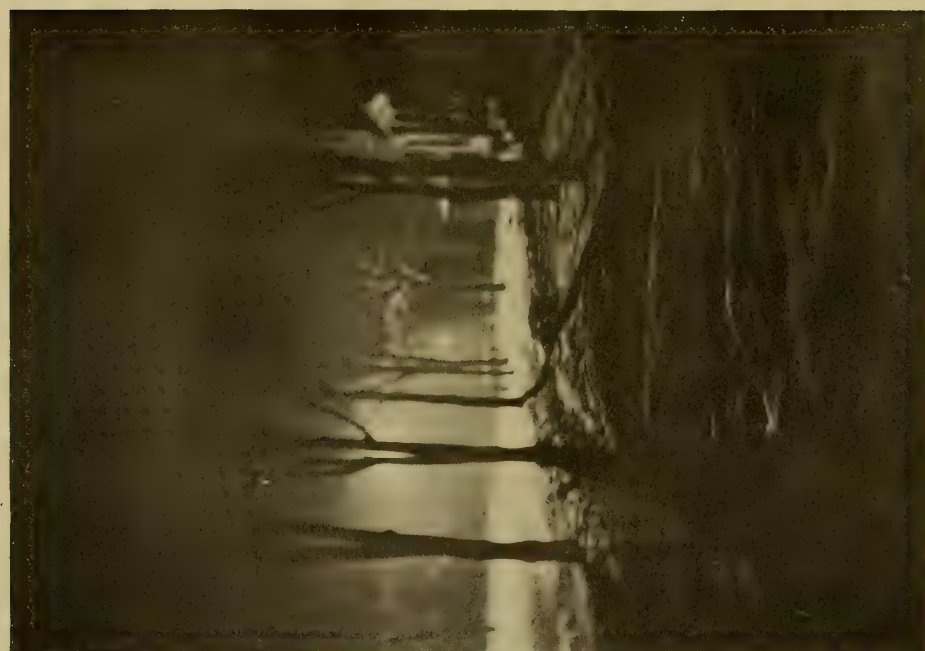
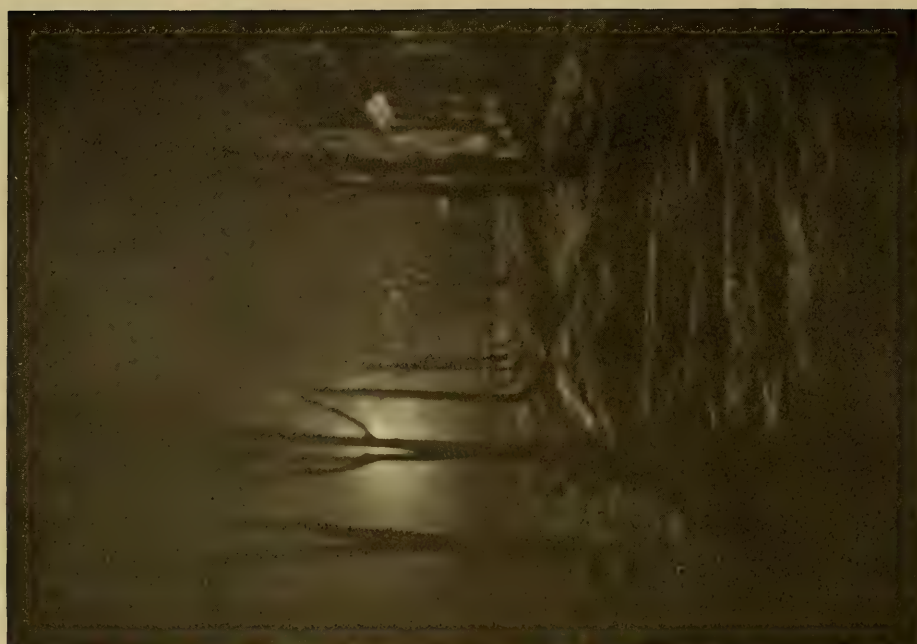
BY WM. ROWLEY

Finally: Why, if the idea is so good, has it been delayed? But, my dear reader, you are a little behind the times when you say that, and you forget that this is Anno Domini 1904. We are not in the palmy days of 1897, when there were only a handful to laud and hang one another—the work, I mean. But the thing is started, and properly, too. First, it was the Salon Club of America, which began with a print exchange, and found that there was far bigger game for it to kill. It has members in New York, Boston, Baltimore, Philadelphia, Chicago, St. Louis, Minnesota, Wisconsin, New Jersey, Illinois, Ohio, Michigan, Indiana, and now California, Oregon and Colorado are reaching out to it, and it is reaching out to them.

Early, a New York member realized that it was a photographic shame that no salon had ever, through certain photographic-political machinations, been held in that city, and he consulted with a Philadelphia member and discovered that the horrible thing which blocked the way was a hollow pumpkin with a tallow candle inside. With this enterprising and vigorous club, the Metropolitan, of New York, the second in size in the State and City, and with his affiliations in the Salon Club over the whole country, Curtis Bell organized and announced the First American Salon in New York; actually the first, for the metropolis; American, because of its connections, through the Salon Club, all over the land. He determined that a jury of artists other than photographic would be uninfluenced by scheming politics and personal vanities, and that, to obtain the greatest respect for the exhibition it was only needful that the jury should be great and distinguished enough. Precisely such a jury Mr. Bell obtained among his personal acquaintances in New York City, and, still further to secure the respect and assistance of the exhibitors of the country, he obtained as patrons of the exhibition, men of national reputation, the list of whose names fill one page of the printed announcement. Without having advertised the fact in any way, requests have been coming in from several of the greater art-academies of the country for the repetition of the exhibition as a whole. Probably, if San Francisco will ask quickly, it, also, may have this great exhibition for a time, with, or separately from its usual successful salon. Several have asked whether we were not afraid of dreadful things happening just because we were acting independently of the—you know the rest. The reply is, simply, that there is nothing whatever to be afraid of. The thing will be done thoroughly and well. The organization is perfect, and the principles are the right ones. The selection of work submitted will be rigidly artistic, but absolutely fair and impartial. There will be no “axes” of any kind. The most rabid antagonist will have the same careful courtesy given to his work, if sent, as the most ardent friend. If the antagonist abstains, so much the worse for him. Several capable people, five or six, may, perhaps, sulk, but there will be many to take their places, and the new man is the man to be reckoned with. It is the undeveloped power which counts, the unknown name which will win. The greatest picture in the greatest of exhibitions will probably be entered by a stranger, a man or woman unknown in exhibition photography at this moment.

Now, with this start, made in a quiet way, a “chain of salons” is no longer regarded as a dream. Photographic societies may now, with far less difficulty than heretofore, organize a series of fine photographic art-exhibitions, and they will find the Salon Club of America and the Metropolitan Camera Club of New York City, ready to co-operate with them and to meet them a little more than half way. Shall they hear from you?





What Doctoring Can Do

On the opposite page are reproduced two pictures that reached the Editor's desk from *The American School of Art and Photography* some weeks ago. A letter of thanks with inquiries added, brought forth the following facts: The two pictures were sent to show how moonlight effects could be secured by employing an ordinary electric light. The original negative, as printed in the first example, gives a very pretty effect. The mass of white directly underneath the arc light is not displeasing, and, for an electric light picture, it is far from being a failure. However, the same negative supplies an excellent foundation for making a splendid moonlight picture, and the second example is given to show that Mr. Schreiber's judgment was well founded, and also to demonstrate to what extremes a negative can be altered to produce any effect desired.

The original negative was made by Mr. Patriarch, of Saginaw, Michigan, one of the students, and the work came to be done in this manner: After submitting the negative for criticism, Mr. Patriarch's next lesson included doctoring negatives. The one at hand being a suitable example, he was given the lesson on his own negative with the result as shown in the second reproduction. As can be imagined, the original negative was not destroyed nor altered. Transparencies were made from it and from them, new negatives, from one of which the second picture was printed, the duplicates being employed in order that Mr. Patriarch might follow the work at every step. His own rendition of the moonlight subject, which is reproduced, differing but slightly from that secured by the master, being equally pleasing and as truthfully presents the idea intended to be conveyed. The two pictures show, most conclusively, how satisfactory a moonlight effect can be obtained from an exposure made by electric light.

When it is realized how much the best workers both here and abroad are dependent upon the after manipulation of the negative for the success which they achieve, it is evident that too much importance can not be given this feature of the work. To say that the worker who has at his command these methods is not more advantageously situated than his brother photographer who must depend upon a straight print from an undoctored negative, would but invite ridicule. The worker who can best command the many possibilities of judicious after work upon the negative will achieve success just in proportion as his manipulative skill and artistic knowledge are made to assist one another. The possibilities that are offered in this direction are but hinted at in the reproduction on the opposite page, showing as they do but the results secured in working for one certain effect. Other and more radical changes could no doubt be shown as the result of well-directed work along this line. The prejudice which has heretofore existed against so-called "faking" is rapidly disappearing and in the face of a strong claim for recognition which its power for good makes possible, so-called "faking" will soon stand clearly as much a part of photography as the simpler processes of intensification, reduction and the like.

Camera Jottings

By DR. H. D'ARCY POWER



WHEN, in the beginning of this year, I determined on a vacation in Europe, I resolved that photographic possibilities should be the first consideration in arranging my itinerary. I therefore decided on going over the Canadian Pacific, notwithstanding the long journey and the loss of time. The latter proved to be greater than I anticipated, but I was well rewarded as will appear later. Starting on May 15th, I spent a day in Sacramento, beautiful in its spring livery, and soon found myself renewing old acquaintanceship with Mount Shasta. There is little need to describe the ever-changing beauties of the king of Californian mountains. It was, on this occasion, more lovely than usual, in a magnificent robe of mist and cloud, and I did what I could in getting flying shots from a rapidly-moving train. Using a F. P. K. 3A with N. C. films and a color screen I succeeded fairly well in getting the snow and cloud effects, but the foreground was necessarily under-exposed. In work done under such circumstances something must be sacrificed, and as the character of high mountain scenery is essentially dependent on the snow and atmosphere, I believe it is better to use the color screen whereby they are excellently rendered, and do what is possible for the landscape by selective intensification. Such negatives, if a little over-printed, make very successful moonlight pictures. In a general way the exposure given was one-twentieth of a second, which, considering the reducing effect of the screen, is about equal to one one-hundredth of a second. This is really not enough, but with a moving train a speed of one-twentieth of a second is the least that can be given without the movement showing.

Over the State line in Oregon we met with magnificent atmospheric effects and a wealth of coloring that made us long for the advent of practical color photography. We spent a day at Portland, and I looked up the local camera club and found a well-appointed and seemingly active institution. Portland should be a good field for pictorial work. There are plenty of bits of striking scenery and an abundance of changing atmospheric effects. From thence northward to Seattle and the international boundary the general type of scenery changes but little, but so varied is it, long stretches of pine and deciduous woodland, alternating with flower-laden meadows and distant mountains, that we constantly regretted our inability to take more than flying shots at its recurring beauties. Northern Washington and the portion of British Columbia between it and the Fraser River are particularly beautiful, especially in color effects. We reached the Fraser River Cañon in the evening, and of what we then saw it is difficult to speak in reasonable terms. I have a fair acquaintance with river scenery. I know the beauties of the upper Thames in the fragrant freshness of early summer, I have passed along the Rhine on a winter night, when clad in a covering of snow its silent hills and ancient ruins seemed almost unearthly beneath the light of a full moon; I am acquainted with the over-praised Hudson, and know that wonderful stretch of river between Vancouver and the Dalles, where the Columbia, between enormous

flower-embroidered cliffs, flows with a majesty and beauty that, in a sense, is unequalled on earth, but for all these things there is language. For what the Fraser offered (and constantly offers) beneath the pale mists of that spring evening, there is no language. The Fraser Cañon is a jagged, twisted cleft between enormous cliffs of black rock, backed by forests of blue-black pine and over-topped by snow-capped peaks. For contents it has one of the wildest mountain rivers in existence, and a wealth of variegated vegetation that baffles description. The foreground rocks, piled in immense masses between ourselves and the river, were moss carpeted with old gold, shot with every imaginable tint of green, the water of the river a deep emerald backed by a mid-distance of silver-stemmed birch-trees, tipped with reddish buds and delicate green leaves, the whole set in a frame of somber pines toned to a deep blue by aerial perspective. Add to this color scheme the rush and roar and spray of a torrential river with a kaleidoscopic change of scene, all bound together by the soft mists of a spring evening, and it may well be doubted if any one could describe what we saw and felt. The failing light and the rapid motion made it impossible to attempt photography, and perhaps it was as well, but if any one seeks a photographic ramble where beauty, variety and majesty are matchless, let him not forget the cañon of the Fraser. We left California, and, in fact, the whole Pacific Coast, in the full glory of spring; when we passed the Fraser Cañon and awoke next morning we were back in winter, and we stayed there until we struck the leafy parks and golden meadows of the Old Country three weeks later. It is only when thus brought suddenly into contact with the East that we fully realize the privilege of living on the Pacific slope. The next day brought us to the region of the Shushwap Lakes with marvelous vistas of valley and mountain reflected in their depths. The general aspect is grand and stern, and vast areas of blackened stumps projecting through the snow from the base to the summit of the lofty mountains, tell of forest fires and give a forbidding aspect to what otherwise might be a scene of beauty. At Albert Cañon our train came to a stop with news of snowslides ahead, and we





turned out for a couple of hours' very welcome exercise on a perfectly flat plain surrounded by high mountains. Our train was carrying a party of Japanese officials and students, and three of their countrywomen, bound for the St. Louis Exposition. They took to snowballing as readily as if they had been raised in Canada, and did great execution, whilst one of their ladies taking four snowballs kept them simultaneously in the air in approved juggler fashion. Then we moved on to Glacier House, and here we were stalled for sixteen hours on account of a bridge destroyed by an avalanche. We took this delay philosophically, our patience much helped by the view we had of four carriages laying at the bottom of a ravine and reduced to very nice matchwood by a similar avalanche the previous week.

The next day, the bridge being repaired, we passed through the snowslide that had done the damage. It was practically a whole mountainside of snow containing dozens of immense pine-trees that stuck out from its broken surface like a forest of toothpicks. This danger once past the rest of the journey into the great Canadian plains was uneventful. The endless waste of snow that lies between the Rockies and Lake Superior offers little of photographic interest at this period of the year. Without approach to the latter, photographic possibilities increase. Lonely and often picturesque log huts are seen until they become the dominant form of architecture. We passed two settlements of Doukhobors, and we regretted our inability to stop and take pictures, for in the matter of quaintness they beat anything we have yet seen. At one of these we noted women wearing coarse, wide trousers, and a chemise outside. The Lake of the Woods district was very pretty, and in summer must have great photographic possibilities; at the time we passed (April 25th) everything was still covered with snow and the lakes solidly frozen. On one occasion we saw a large gray wolf, on another, a fox, crossing their surface. Finally, after passing the desolate region around Lake Superior, we entered the province of Ontario and returned to civilization. Comfortable farm-houses and broad, well-kept pastures mark the way to Ottawa

and Montreal. Arrived at the latter town we still found King Winter reigning, and as we had a week to wait for our boat we went down to New York. In our eastern metropolis the buds were swelling and here and there tipped with green, but we were met by cold, piercing winds and icy rain that made us sigh for a San Francisco fog as a comparative elysium. Still we spent a few very pleasant days in New York, and have to thank the affable secretary of the Camera Club, Mr. Boursault, and its eminent worker, Mr. Stieglitz, for a delightful visit. It is hard to be a photographic visitor to New York without contact with the clash of photographic schools, and, alas, of photographic politics. My personal sympathies with the men whose devotion and ability have placed American pictorial photography in the proud position it now occupies among the countries of Europe has been previously stated. I therefore learned with pleasure that the recent election had returned the control of the Camera Club to the party that in the past gave it members and standing. I returned to Montreal to find that my ship was icebound and I would have to wait another four days. It was no hardship, for we were in a most interesting city. Montreal is still an old French town; red-tiled houses, with the dust of a century or two, strange back courtyards, streets that are never straight, and churches of all kinds and ages, go to form a picture that is anything but American. Whilst English is universally understood, still the mass of the people of all classes converse in French, which, in a large part of the city, is the only language in stores and streets. Apart from the great interest of the streets and buildings, the surrounding country is exceedingly beautiful, and Montreal should be an active center of pictorial work. Strange to say there seems little activity here. I visited the Camera Club without being able to ascertain that any one was engaged in serious work. Perhaps I was unfortunate in the time of my visit—but not to speak of our city, San Francisco, of about the same size, it compared unfavorably with our smaller northern neighbor, Portland. In my next I will relate my experiences of an unusually interesting sea and river journey.



THRESHING IN MISSOURI

BY BELLE JOHNSON



PORTRAIT STUDY ON BROMIDE
by E. N. SEWELL

Bromide Work

By E. N. SEWELL

PART II

Apparatus

No attempt will be made here to describe the actual construction of the apparatus necessary to make enlargements except in a brief and rudimentary way. This is not a treatise on carpentry.

The easiest and simplest way is to procure one of the many types of enlarging boxes now offered for sale—the best being that of the Eastman Kodak Company—and then *follow implicitly the manufacturers' directions*. Enlarging by this means is purely mechanical as there is absolutely no chance for the operator to manipulate the result except by varying the development or time of exposure—dodging, or other means of varying the print being out of the question. But as a thorough drilling in the mechanics of the art is necessary, the method is probably the best for the beginner. The investment is small and will not be lost, for the same outfit may afterward be adapted to any one of the other and more advanced methods.

Next in order comes the method of adapting the ordinary hand-camera with bellows and focusing lens (the fixed focus boxes cannot be conveniently used). Right here is the place for a word of caution about lenses. The lens that you have in your camera is good enough—any lens that is free from defects and of not too short focus is good. The ordinary “rapid rectilinear” is ideal for this use. A wide angle lens of course will not do. If a special lens be provided it should be a fairly good one, rectilinear of course, with a flat field and of a focal length at least equal to, if not greater than the ordinary.

For daylight work choose any room the lady of the house will let you have. All the doors and windows or other openings admitting light should be *completely* darkened. Bromide is very good natured but won't stand the slightest white light. In the dark covering of one of the windows at a convenient height a hole should be cut of proper size, against or in which should be fitted a frame or some contrivance for holding the negative without admitting any daylight, except such as is intended to pass through the negative itself. Another (larger) hole may be cut in the same window covering, at a greater height and protected with two or three sheets of yellow, or “post office” paper. The purpose of this is to get sufficient light of the right kind to work by.

Enough red or yellow light may be admitted to make working easy as long the paper is not exposed directly to it for too long a time. However, the light from an ordinary candle will do the paper no harm if the candle be so placed that the paper is not directly exposed to it.

With the opening for the negative at the right height from the floor your camera, *minus the back*, and fastened to a box mounted on a table may be pushed up to the window until the open back fits against the negative with the lens pointing into the room. These remarks apply to any camera that has a removable back and focusing lens, whether *hand*, or *stand*, or *view-camera*. A hood of black paper or cloth should be fastened to the window covering, so as to fit around the

camera when it is in place. The box and the camera mounted on it should be firm and rigid so as not to be displaced by any accident, or during focusing. An easel may be rigged up in many ways, the simplest being to get a flat and smooth board large enough to hold the largest paper you expect to use, and fasten it to some support—say a box—so that when resting on the other end of the table that holds the camera, or on some other support, it will be directly in front of the lens and be capable of being pushed toward, or back from the lens. Needless to say the board should always be perpendicular and parallel with the negative. A large sheet of clean, white paper—white blotting-paper is the best—should be pinned on to the board so as to present a good surface to pin the bromide paper against.

The window selected should be a north one, if possible, as from that direction the most even light is to be had. Any other window *may* be made to serve the purpose, but no work should be attempted when the sun is shining on the window. The window should have no trees near it or other objects which will interfere with the light, either by absorbing it or reflecting it unduly. A dead-white reflector set under the window at an angle of say forty-five degrees, will be a great advantage if the window be too near the ground, a top floor window will not need it. So much for the daylight apparatus.

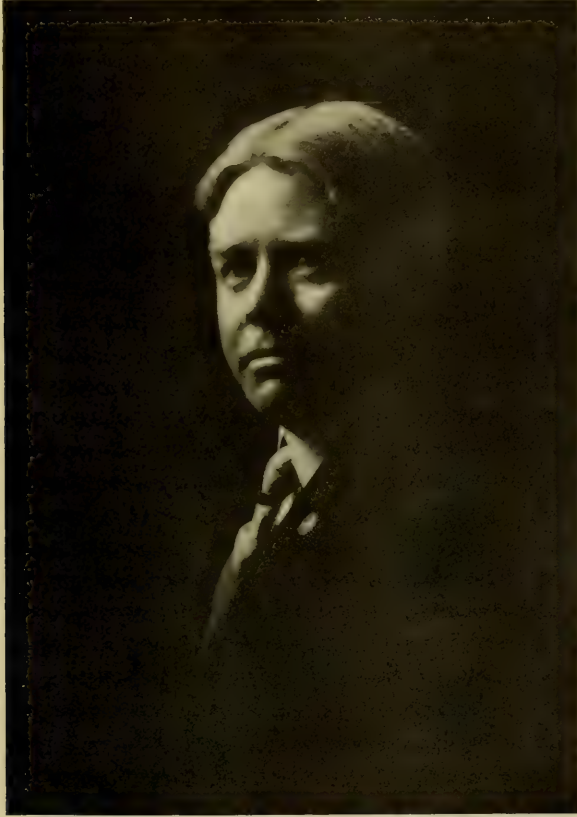
For working by artificial light the same apparatus may be used, but instead of backing the camera up against a window a light-box must be provided. The actual requirement here being to provide a source of light that after being properly diffused, or spread, by means of ground glass, tissue-paper, or the more expensive diffusing lenses known as “condensers” will still be strong enough to print in a reasonable time. It should be remembered that too weak a light will give harsh contrasts besides requiring long exposures. Detailed directions for the construction of a light-box for use of condensers will be found in the *Photo-Miniature* No. 16, “Bromide Printing and Enlarging.” The same box may be used and tissue-paper or ground glass substituted for the condensers. The ground glass is of course better than tissue-paper being less liable to damage. At least three or four thicknesses about one inch apart are necessary to diffuse the light, and should be placed at least eighteen inches from the light and be of a size several times larger than the negative. The box should be so arranged that the space between the ground glass and negative should be at least six or eight inches, in order that the grain of the glass will not be focused into the print. With such a box any light of sufficient brilliancy may be used, acetylene, electric arc, lime-light, or coal-oil. For the last named there are now several burners which give a very fine white incandescent light of great brilliancy, one manufacturer furnishing lamps, or if needed, complete enlarging apparatuses.* So much for apparatus and construction.

Manipulation

In the actual work of making the enlargement the negative should be placed in the camera (or in the holder in the window or light-box) upside down, and with the glass side toward the light. This arrangement will give you an image on the screen (easel) exactly as you saw it in nature and as you wish it in the print.

*It is impossible in a magazine article to go into great detail in the matter of construction or kind of light or apparatus to be used, but any inquiry addressed to the writer, in care of CAMERA CRAFT, will be answered in detail.

Most writers give very careful directions how to obtain enlargements of certain sizes. I can safely say, pay no attention whatever to anything of the kind. Go at it the other way—the negative pleases you and you would like an 8x10 print—forget your mathematics and instead take a piece of pasteboard, or any old thing 8x10 in size and hold it on the easel, then rack out the lens until you see how the projected image fits the paper. If it's too large for the paper bring the easel a little nearer and rack out the lens a little farther. One or two attempts will



PORTRAIT OF MR. M.

BY E. N. SEWELL

give you what you want. Having determined the size, it is now necessary to bring it to a sharp focus.

Right here is a chance to study your composition. It is very seldom that the correct shape or composition of the finished print is coincident with the exact dimensions of the negative. Printing by projection enables you to choose just what you want out of the negative without subsequent trimming to the same extent as in contact printing.

From a 4x5 negative it's ten to one that you always make a 4x5 print and then neglect to trim it, if you do trim it the result is too small to be important.

Focusing

A maximum of illumination is of course needful for focusing the image on the easel, so the lens aperture may be thrown open to the maximum, and when

using ground glass for diffusing the light all but one thickness may be removed. The image should then be focused (by racking the lens out and back) at some point near the margin of the picture on a piece of smooth, white paper held in the hand against the easel and moved from place to place, for if it is sharp there with the wide-open aperture it is bound to be sharp all over, but the reverse of this does not apply. There are some lenses, however, that will not admit of this, that is, there are some lenses with which the focus at $F/4$ differs from that of $F/16$. It took the writer a long time to discover why a sharp focus at $F/4$ gave a blurred print at $F/16$. The reason is one which should not exist, but for which the lens makers are responsible. The obvious remedy is to both focus and expose at the same aperture, and $F/16$ is recommended as probably the best unless a smaller one be needful to cut down the time of exposure for a very thin plate. It is very difficult at times to obtain a sharp focus where clear lines are absent or the negative is dense, and some means of obviating this difficulty should always be at hand. After determining the proper relative positions of lens and easel for the size of enlargement needed, another negative which has sharp, clear lines and contrasts may be inserted until the proper focus is had. (No attention should be paid here to the size of negative or image, focus is all you are after now.) Such a negative is usually at hand or can be made by taking your camera and making a very short exposure on a subject having strong lights and shadows, and then developing it for contrast. It will not give you even a passable print but will be good to keep for the purpose suggested, and is much more easily made than a line screen. Those that desire a screen made especially for focusing enlargements should take an unexposed plate and fix it out in hypo, washing and drying it as usual. It may then be ruled with a ruling pen and india-ink, or some such preparation. The lines will stand out clear and strong on the easel when the screen is in place. The focus should always be determined at some point near the margin as before suggested. The printing negative may now be placed in position and all the ground glass replaced and you are ready for business.

The foregoing remarks on focusing are intended for the beginner's first lessons. He will soon learn that the most pleasing results are to be had through judicious elimination of focus. I recently read in an English work that no hand-work (meaning retouching or spotting) should be done on a negative intended for enlarging as it would show in an unpleasing way in a well-focused print. This is not so if the hand-work be properly done. But the writer of that work was speaking of portraits. While I am not a "fuzzytype" man, I consider a sharply focused portrait an abomination. A good portrait negative can be thrown so out of focus in projection as to eliminate all lines and evidence of hand-work and still not be fuzzy, or even appear out of focus if looked at from a proper distance. It will be clear and soft with qualities that a sharp focus would entirely destroy. Portraiture probably lends itself to this treatment more than landscape or similar work, but it is safe to say that the artistic quality of a print of any character can be improved in a majority of cases by a soft focus. The added atmosphere in a print is worth the loss of definition which is too often an offense to the eye. The trouble with most photographs is that the lens has caught more than the eye could, and has frozen it into a rigidity that needs softening out. But of course diffused focus is a secondary lesson and should not be attempted until one has advanced to it.

(To be continued.)

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX

SAN FRANCISCO, CALIFORNIA, SEPTEMBER, 1904

No. 4

Reduced Railroad Fares for Photographers

CAMERA CRAFT is now in a position to announce that, as a result of no small amount of work, the possibilities of securing for the vast army of photographers the same concessions or perhaps better, that are granted to hunters, fishers and others on the railroads of the country. That the enthusiastic devotee of the camera in his search a-field for beauty as Nature places it before us can make himself one of the most potent advertisers of a railroad and its scenic beauties is undeniable. That he is an equally desirable passenger with those heretofore favored can hardly be disputed. That any favors shown will result in increased business to more than compensate for the reduction made, should seem self-evident. As the proposition now stands it is proposed that a reduction be granted to all photographers carrying a camera and showing a paid-up membership ticket in an established photographic society. The concession, if secured, will not only stimulate interest in photography but be productive of great good in the encouragement and upbuilding of local camera clubs. This last feature is in itself sufficient reason for the putting forth of the best efforts of which we are capable. Our success will mean not only the good of all but will give to the Pacific Coast and her railroads the honor of having first appreciated the importance of the matter.

Camera Craft's Position

CAMERA CRAFT has been accused of this, of that, and the other thing. While praise has far outweighed the little that has been offered in the other direction, both are worthy of consideration. From time to time we have said a good word for the aims of the Photo-Secessionists, believing as we have that their work tended to the elevation of photography. There has been no partiality shown. Now that another body of men including, as it should naturally, a few who could not endorse the entire tenets of the other, have got down to serious work, space will be given them as unstinted as is permissible. The position of CAMERA CRAFT is influenced by no partiality, no personal feelings or no desire to foster or popularize a plan or scheme of its own.

The Fiasco at St. Louis

Our enterprising contemporary, *The Photographer*, is doing a good work in giving us, under the above heading, an insight into the methods of the Exposition management in dealing with the photographers, not only of our own country but of the world. Our own workers, returning from St. Louis and their trip under the auspices of the California Camera Club, have voiced in no mild language their displeasure at finding photographic exhibits heretofore thought worthy of serious consideration in some of the foreign homes of art that have been used as salon headquarters, made use of at St. Louis as a background for a shoe factory in full operation. The case takes a still more serious aspect when we find a printer complaining that the incongruity of a quietly framed exhibit of artistic photographs crowded into close proximity to a high-speed printing press prevented, by its discordance, his full enjoyment of the displayed perfection of machinery for the production of the printed page.

A Pacific Coast Photographer Honored

E. S. Curtis of Seattle was selected by President Roosevelt to make a series of photographs during one of his recent trips as well as of his home and family at Oyster Bay. Mr. Curtis has just returned and reports that he secured a splendid series of negatives. Not alone his ability as a photographer but his close study of the Indian, an interest which the President shares most enthusiastically, made the combination a strong one and productive of the best results. The splendid series of Indian pictures for which Mr. Curtis is famed will be made the leading feature in early issues of *Scribner's*, taking the form of articles treating separately various groups; both the text and illustrations being supplied by Mr. Curtis.

A Hint for the Manufacturer

That two most important Photographic Conventions will be held on the Pacific Coast during the next few months should not be overlooked by the manufacturers desirous of reaching the trade in this territory. That the expense of making a display at them will perhaps be greater than at conventions nearer home is admitted, but the attendance, the enthusiasm and the sincerity of those interested far outweigh these considerations. Compare for a moment the attendance, reported as thirty-two, at a State Convention held earlier in the year in one of the Northern States with the crowded hall of our own last meeting of the kind. Realize, and realize fully, the fact that the agent of a certain lens manufacturing firm who took the opportunity to have his goods well displayed and exploited at this last convention of ours, reaped his reward in sales which exceeded during the next three months those of the preceding year in this territory. You may be sure the same firm will repeat their effort. CAMERA CRAFT suggests that the rest do likewise.

The American Federation of Photographic Societies

On another page, in Mr. Goe's department will be found a clear statement of the aims and purposes of this organization. That it is meeting with the hearty co-operation of pictorial photographers throughout the country as well as with that of the most enterprising and progressive photographic societies, is a most gratifying

indication that only the need of an energetic body of men to go forward with the work, has been lacking in the past. In Curtis Bell and the well-chosen lieutenants with which he has surrounded himself, the cause of pictorial photography has found a body to champion its claims worthy of its support. Its support has been given.

Our Two Coming Conventions

The Fourth Annual Convention of the Photographers' Association of the Pacific Northwest will be held at Tacoma, Washington, from September 21st to the 24th inclusive. The Second Annual Convention of the Photographers' Association of California will be held at San Francisco on October 26th, 27th and 28th. The Secretary of the first is H. D. Trover, Salem, Oregon; and of the latter, D. F. Mullender, 121 Post Street, San Francisco. The enthusiasm which has heretofore been displayed has only acted as a stimulus which assures even greater things in the two Conventions so near at hand. The co-operation of every photographer in the territory included should be freely given. The educational features will be made even more attractive than on former occasions, and a much larger and more varied display is already assured. Manufacturers have awakened more generally to the fact that the attendance and enthusiasm shown warrant fully the extra expense of making a display so far from their base of supplies. All in all, these two Conventions should set a standard hard to excel.

A Danger Avoided

The writer of "Piffle," a weekly department of most entertaining matter in *Photography*, recently devoted a lengthy paragraph to a humorous skit touching upon the experience of a photographer who possessed a cloud negative which he printed into everything. One of our esteemed contemporaries recently quoted from this department but with a forethought most consistent, neglected to include this paragraph. Three of its own illustrations in the same issue contained clouds from the same negative; two of them appearing on the same page. It is this and like dangers which CAMERA CRAFT seeks to avoid by using only original articles. Our own forethought is not trustworthy to the same extent, owing perhaps to the climate of California being less rigorous than that of Minnesota.

A Suggestion Wanted

As a reader of detective stories, the advertisements of various "agencies" promising to send a badge and a certificate purporting to make a full-fledged detective of me, appealed to me in my youth. A little later various other propositions were as temptingly displayed in printers' ink. Still later, in fact quite recently, we have been tempted and sorely so, to send five dollars and secure a certificate assuring, with all the conviction of gilt and scroll work, that the name penned in was that of a "proficient employee." Believing that the pages of CAMERA CRAFT are at least as good as those of any other photographic publication as a means of publicity, the idea at once suggests itself that something along the same lines might be launched most profitably. Will some of our most sanguine readers advise us just what kind of a certificate would most strongly appeal to their susceptibilities?

Club Notes

News Items From the Various Camera Clubs

By C. A. Goe

Brooklyn Camera Club

This progressive club is now equipped at 776 Manhattan Avenue, with working rooms and a laboratory second to none in the metropolis. Their recent Annual Exhibition was a great success, the class of work exhibited being of the highest, and far excelling that shown at any previous exhibition of this organization.

affiliating with them, will make the Brooklyn Camera Club one of the strongest photographic clubs in the East.

C. C. C. Print Exhibition

A very worthy collection of prints is now on the Club walls, the work of E. N. Sewell. It consists entirely of bromid prints and embraces landscapes, marines, portraiture,

To Our Western Workers

Fayette J. Clute, the Editor of CAMERA CRAFT, and Charles A. Goe, Corresponding Secretary of the California Camera Club, have been appointed Pacific Coast members of the Salon Committees of the First American Salon and of the American Federation of Photographic Societies, respectively. Three sets of pictures are desired, viz: one for the First American Salon, another for the salon members, and a third for the exhibition members of the American Federation of Photographic Societies. Circulars will at once be prepared and mailed to all known exhibitors west of the Rocky Mountains. We would be pleased however to hear from other pictorial workers who have not previously exhibited but who might be induced to do so. As announced in our July issue, pictures may be sent to CAMERA CRAFT, 114 Geary Street, San Francisco, unframed and unglazed, to be sent to New York in one shipment, thus minimizing the cost of transportation and should be in their hands to leave San Francisco on November 1st. Mr. Goe's long identification with salon work as well as his wide acquaintance among exhibitors should be ample guarantee that all possible will be done to secure for the Pacific Coast and the good workers which it contains the representation that is so justly deserved.

The Brooklyn Camera Club has passed that trying period which comes to all such societies, and has settled down as a purely photographic club, which aims to foster and encourage pictorial photography. At the recent convention of the formation of the American Federation of Photographic Societies, this Club was represented among the delegates, and entered as an exhibition member in the Federation. This will greatly add to the Club's prestige, and with the prospects in the near future of another club

genre, etc., and is an exhibition well worth viewing. Mr. Sewell is advancing rapidly as an artistic photographer, and it is to be regretted that in this particular exhibition he attempted to show such a large number of prints; in fact, had he cut the number in half, leaving out a few that possess no particular artistic value it would have resulted more to his credit and to the greater benefit of those members who study composition from the prints on the walls. As a bromid printer Mr. Sewell excels.

A National Photographic Art Movement

The American Federation of Photographic Societies is *un fait accompli* as its first proposer, Monsieur Demachy, will say when he reads of it. At least three other men were pushing the important movement—Mr. Clute of CAMERA CRAFT, Mr. Todd of *Photo Beacon*, and Walter Zimmerman of Philadelphia, at about the same time. The plans were good and have been unanimously endorsed by those taking part in the movement.

In Curtis Bell of New York was found the organizer and man of determination for

shall be forwarded to New York City, where it will be judged and selected by a jury of twenty artists of highest rank and reputation, who are absolutely competent to decide which pictures are worthy of admission, and there is no question whatever that these artists will keep their faithful promises and will serve. This is an important statement, for the suggestion is made to the contrary by those who would put obstacles in the way of the great Salon. After the New York exhibition a route list will be arranged, the same exhibition going to all cities whose camera clubs have participated in the movement. The membership has been limited to twelve societies in cities of over 100,000.



S. C. Bullenkamp Dr. W. J. Furness Curtis Bell W. T. Knox
Dr. J. G. Miller Walter Zimmerman F. C. Beach Charles E. Fairman
Daniel Baker John F. Thurston

President, and while others were thinking about it he announced the First American Salon of New York as a fact, and called a meeting of the representatives of the most important photographic societies in the East, to be held on the evening of June 28th in New York, which was attended by the following: C. E. Fairman, Washington, D. C.; F. Dundas Todd, Chicago; J. H. Thurston, Boston; Wm. T. Knox, Brooklyn; F. C. Beach, Toronto; Curtis Bell, Dr. W. J. Furness, S. C. Bullenkamp, New York; Dr. J. G. Miller, Daniel Baker, Adolph Petzold and Walter Zimmerman, Philadelphia.

The greatest undertaking was the organization of the "Chain of Salons." The idea is that the work of this country and Europe

Another very desirable feature of the Federation, in which photographic societies in cities of almost any size may join, is the Exhibition Organization. Such societies will receive four exhibitions or wall shows per annum, fifty pictures each, selected by the Art Committee of the Federation, Rudolf Eickemeyer, Jr., Chairman, from the best photographic art work of each year—two hundred pictures in all. Membership in this branch will give photographic societies unable to organize a salon of their own, the use of a large number of pictures of the highest grade. In addition to the salons and exhibitions the organizations joining in the movement will also have the lantern-slide exchange and be members of the Historical

Section. There is another arrangement by which a member in good standing in any organization of the Federation may visit any other club in it, with the privilege of membership subject to the rules of each individual club.

The question of salon exhibitions is now simplified for committees and exhibitors; heretofore there have been conflicting dates, difficulty in securing the return of pictures for another exhibition, heavy express charges on accepted and rejected work to and from the place where the exhibition is held. By the new arrangement the exhibitor at twelve salons of the highest importance will pay the express charges to the first exhibition and from the last of them, all rejected work being immediately returned, reducing annoyance and expenses to the minimum.

If the exhibitor desire to sell his pictures he should provide additional prints exactly alike in mounting, printing, etc., for the local committee. It is more than likely that the whole of the exhibition will be bought up at New York alone. The advantages to the local committees are equally great, both as to quality of work obtained and the convenience of having pictures received and sent in one shipment. Of course if any of the societies belonging to the Federation desire to give a special exhibition of the work of its own members at the same time, such an exhibition, which would be hung separately, would add greatly to the interest created by the main exhibition. Photographic societies which are on good terms with Fine Arts academies, such as the Mark Hopkins, San Francisco, and Corcoran Gallery, Washington, have unusual advantages in connection with the plan.

The earnest co-operation of every art-photographic worker is desired. There is no promise of admission of pictures, but the promise is made that the artist who has never before offered his work will be placed on the same footing as that of the founders of the organization. When the pictures are placed before the jury no information will be given them other than the title of the picture, the jury not knowing the maker of the pictures they have selected until they read the names in the printed catalog of the Salon. Everything has to go through the door and nothing can go over the wall, either by "invitation" or in any other way. If these terms are not fair, what in the world can there be that is fair?

The officers of the American Federation of Photographic Societies are: President, Curtis Bell, 558 Fifth Avenue, New York; First Vice-President, Walter Zimmerman, Philadelphia; Second Vice-President, F. Dundas Todd, Chicago; Treasurer, John H. Thurston, Boston; Salon Director, Rudolf Eickemeyer, New York; Historian, Daniel Baker, Philadelphia; Chairman of Salon Committee, F. C. Beach, New York; Secretary, S. C. Bullenkamp, New York.

C. C. C. Demonstrations

On the evening of Tuesday, July 26th, W. E. Dassonville delivered a lecture before the Club on the "Application of Artistic Principles to Photography." Mr. Dassonville is an old member of the Club and his ability as an artist-photographer was assurance enough to the members to fill the rooms with an audience desirous of securing such instruction as he could give them. While Mr. Dassonville did not adhere strictly to his subject the information he gave on exposure, development, and the various methods of printing, proved of great value and can only result in profit to those who were privileged to hear Mr. Dassonville.

On behalf of the Demonstration Committee the Chairman, Mr. Sewell, has announced the following dates: Saturday, August 20th (afternoon and evening)—Harry Lovick of the Eastman Kodak Company on Velox. Late in August—Gilbert Hassell on "Exposure." Early in September—Gilbert Hassell on "Development." Late in September—John Beebe on "Lenses," and others.

Classes have been formed under the direction of the Committee and on Tuesday evening, August 2d, Mr. Sewell was the instructor in Bromid work, following it up on August 15th with a class in Velox printing. This series of instruction will cover all branches of photographic work, each class being limited to six members, and from the large number of names registered with the Assistant Secretary of the Club the success of this venture is assured. The Committee deserves commendation for this much-needed help to the new members entering the Club.

New Secretary

At the last regular meeting of the California Camera Club, W. E. Dassonville was elected Secretary to fill the vacancy made by the resignation of Mr. Palmer.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Interior Photography and Small Stops

F. H. Evans has been contributing to the *English Amateur Photographer* a series of very valuable articles on the subject of interior architectural photography, illustrated by splendid examples of his own work, that leave no doubt in the mind of the reader that his precept rests on a foundation of more than successful practice. In one of these articles the writer deals with the question of small versus large stops and his words are well worth considering, not as a rule of general photographic practice, but as the truest method of expressing the spirit of architectural beauty. He says: "I regret to say I have no sympathy with those who advocate large apertures to secure artistic treatment. This belief has no foundation in fact. Artistic success is not got so cheaply as all that; artistic success comes from proper choice of subject, proper care in composition, proper state of the light in which the exposure is made, and a properly full exposure on the right sort of film with the right screen. If these little items are rightly managed, the stop may be F/32, F/45, or F/64, without any difference in the result, especially if the print be made on a proper texture of paper, such as C. C. platinotype, that enormously valuable gift to the pictorial photographic worker.

"Nothing is more destructive to artistic success, or annoying to the normal eye, than bad focusing with large apertures; and as the planes in interior work are so many, and of such great depth, it is absurd to sacrifice any one or more of them for the benefit of the others, when such a moderate stop as F/32 will mostly bring all planes to a reasonably detailed focus, and produce a picture that cannot on that score be accused of being inartistic.

"If a doubting Thomas reads this diatribe on the error of using too large stops, and smiles in a superior fashion, let him try the experiment of taking the same (properly lit) picture at F/8 and F/32, choosing a subject containing widely divergent planes, and print both negatives on C. C. platinotype paper; if he then submits both to a trained artist for criticism, he will be astonished at the verdict, if, that is, he does not previously decide for himself for the F/32 sample."

This is very much the same view as I advocated in a past article on the use of the pinhole in dealing with cathedral interiors, in which I think the small sizes should be used.

Dr. Gasser on Gum Printing

Dr. Stephen Gasser's paper in the *Photographische Rundschau* on "Errors and Fallacies in Gum Printing" is a decidedly dictatorial pronunciamento on the subject, which, however, is worth careful reading and consideration because the work seems to have been scientifically done by photometric methods. Nevertheless it is not certain that the writer has not added to the errors he proposes to correct. For example, it is dogmatically stated that the use of ammonium in place of potassium bichromate makes little difference in sensitizing. Speaking from no little experience, I have no hesitation in saying that the printing time is greatly shortened with the ammonium salt, and the film much tougher so that a brush development which would be ruinous to a print sensitized with the potassium salt is easily carried out with the ammonium. I have always followed Demachy's directions in this matter using the ammonium salt for brush-developed pictures, and

the potassium salt for water development, but in the case of the former I have not found it necessary to add chromic acid as Demachy advises.

In regard to the quantity of bichromate used, Dr. Gasser is emphatic in stating that except for loss of sensibility, and need of corresponding excess in exposure, the amount may vary from one-half to forty parts to a hundred of water without effect on the image. This may be true, for I cannot assert the contrary, but when the writer says that the variations in the quantity of gum from five per cent to fifty per cent does not materially affect the character of the image, it will be difficult to get practical workers to agree with him, for the general experience is that too little gum causes flattening of the picture by retention of pigment in the high lights. Dr. Gasser condemns the use of other colloids such as gelatin, starch, etc., in addition to the gum. He denies that they increase the half-tone, and in more than one place enunciates the doctrine that the value of gum printing is to suppress half-tone. Surely that is a minor value and not a character of the process. There are cases where the suppression of half-tone is of artistic value, and the gum expert can use the process to attain this end in a way impossible with any other; but such a use is exceptional, and some of the best gum workers have habitually preserved the most delicate half-tone, for example, Demachy and Puyo. There is an unfortunate tendency for the Teutonic vision to be limited to the borders of the Fatherland, it crops out in the writings of Dr. Gasser when he states that "Single printing is now little used."

Dealing with the subject of the continuing action of light Dr. Gasser states that this action is limited. For the first two hours it is equal to one degree of Vogel's photometer, and ceases after twenty hours when it is between two and three degrees. In regard to the best time for printing it is stated that the paper is most sensitive shortly after coating, when the film is no longer sticky, but the paper is still damp. This is exactly my own experience, and I believe that the best results are then obtained. The writer states that further drying diminishes the sensibility, and damping the paper again increases it. There is little doubt but that this is true, as the same thing occurs in carbon printing. On the subject of exposure the writer takes

practically the same ground that most experts in other printing methods adopt, namely, it is all important, and errors therein can only be slightly rectified by subsequent development, to all of which I am content to add a fervent "Amen."

It is maintained that while development is the most essential of the factors in determining the character of the image, the same is also largely influenced by the paper, color, and sizing, these latter affecting both the number of the half-tones and the purity of the image; thus insufficiently sized paper may give rise to partial reversal, whilst rough paper increases the length of the tone scale. Finally, the writer asserts that the maximum of detail is obtained by floating the print on cold water, whilst the maximum of half-tone is secured by spraying the print without previous soaking.

Plates Fogged in the Camera

The *British Journal of Photography* draws attention to the danger of leaving plates for any length of time in even light-tight cameras in consequence of emanations from varnishes used on the interior. Dr. Russell, who investigated this subject some time ago, states that the chief cause of this chemical action is turpentine, which is much used in the making of black varnishes. Furthermore, it seems from the experiments of Herr Van Aubel that resin also is a cause of fog, and that not only is this used in many varnishes, but it is used in India to adulterate shellac, thus introducing an unexpected danger.

A Sensitizing Bath for Carbon Tissue

M. Vaucamps, writing in the *Moniteur de la Photographie*, gives the following as conferring a high degree of sensitiveness to carbon tissue:

Bichromate of potassium.....	80 gm.
Hot distilled water.....	1,000 c. c.
Bicarbonate of soda.....	2 gm.
Bromid of potassium.....	1.5 gm.

Mix in the order above stated, taking care that the bichromate of potassium is completely dissolved before the other ingredients are added. Care must be taken not to use the solution until it is quite cold.

Sodium bicarbonate has been previously advocated as a means of increasing the stability of carbon tissue, and increasing contrast, but I imagined that this was at the expense of its sensibility to light.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

"A Few Wrinkles"

One of my correspondents sends in an article with this caption but gives no name or address except Cherokee. There are just seven postoffices by that name in the last postal guide. If my correspondent will advise me which one he claims as his address I will be only too glad to answer his letter.

Another Method of Photo Sketching

One of my most valued correspondents who has given me many good hints in the past, is Ray Kerr, of Eugene, Oregon; in a recent letter he says:

"In the March issue of CAMERA CRAFT appeared a very good article on photo sketching, but the method there given while presenting many points of excellence has the disadvantage of requiring that the user thereof sensitize his own paper. The horror of the average amateur for this operation as well as for the complications too likely to accompany the work, causes him to leave the process alone despite the fact that he often desires to make sketches in some such manner.

"The following method will give equally good results and recommends itself on account of its simplicity: Print a sheet of ordinary blue-print paper under the negative to about half the depth required for a good print. Develop as usual and dry between blotters. When dry, sketch in the lines as desired, employing water-proof ink. Lead-pencil, charcoal, or crayon may be employed if desired, but the results are not so satisfactory. The sketch finished, place it in a ten-per-cent solution of sodium carbonate in which the print will bleach out entirely, leaving only the sketch. Rinse in water and dry. The only caution to be observed is to allow nothing to touch the face of the work if crayon has been employed. Where pencil

or charcoal has been used some care is also required. Variations of the process can be used to produce composite pictures and as a method of 'building up' advertising matter it should commend itself to the man so interested."

A Comfortable Closet

One of my amateur friends found he could not stand the pressure of being confined in a closet in company with a ruby lamp for more than a half hour at a time, particularly as no ventilation could be secured. The house being a rented one, he did not feel that he could saw the requisite opening for either a ruby window or a ventilator in the door, much less in the wall. Why couldn't he buy a door of his own? He did. The standard sized doors do not cost much at the mill and so he promptly invested in one. A trapped opening was made top and bottom to permit of ventilation. Another opening, cut at the requisite height, was glazed with a sheet of ruby and one of orange glass. A small folding shelf placed on the outer side permitted an ordinary lamp to be placed where it could cast its light through the colored glass and allow him to work in comfort impossible with a light on the inner side of the door. Most house doors lift off their hinges quite easily and if the hinges on the substitute article be rightly located it is but the work of a moment to make the change. Another advantage of this plan lies in the fact that if it be found necessary to ornament the edges of the door with a strip of thick cloth to prevent light leaking in, the work can be done on the substitute article where the unsightliness of the decoration might forbid its being employed on the regular occupant of the door casing. The idea is certainly a good one and applicable in a great many cases.

With the Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Hand-Feed Lamps

As a general thing Pacific Coast photo-engravers look with disfavor upon the hand-feed lamp. Why this is so I am unable to find out for the reason that everybody who uses a hand-feed lamp is satisfied with it. Many workers will cry out loudly against the hand-feed lamp, but come to find out their experience and it develops they have never worked one. All they know is what they have been told. The truth is the hand-feed lamp has unjustly received "a black eye." The fact of the matter is that the hand-feed lamp is as good as any other when it comes to actual work. The automatic lamps are a little more convenient, but they need attention at times. And then they have that tendency to get out of order with the consequent repair bills. Of course it's a little bother to adjust the carbons of the hand-feed lamp for every exposure, but this is compensated for in many ways. The hand-feed lamp will burn about ten minutes, it never gets out of order, it will go out when not wanted and so save current, and, besides, it costs less than the others.

Etching Half-Tones

The following translation in the *Process Photogram*, from E. Klimsch's *Jahrbuch*, is a valuable and practical bit of information for any photo-engraver: "The sensitizing solution must not be used as soon as made, for the print then easily leaves the plate. It is ready for use after standing three days, and keeps for a month or less, according to the way in which it is stored. A copper half-tone is scarcely ever made at a single etching. The reason for this is

that only the surface of the dot is covered with the enamel resist, and hence, after the first etch, the sides of the dot are attacked by the etching fluid. This brings about a general reduction of the total area of the dot, so that while in the etching bath a continuous lightening of the whole image is bound to take place. In the case of originals with not very deep shadows, the necessary printing strength may be frequently obtained in one etching by making a correspondingly darker print. But with prints of deep and modulated shadows this is not possible, as the fine white dots in the shadows would be greatly over-etched. The rule is that the first etch should be long enough to give the shadows their proper printing strength. If it is seen from the proofs, in spite of sufficient etching of the shadows, that the latter are still too dark compared with the original, the plates can be taken further in the bath until they are sufficiently lightened. If, on the other hand, they are lighter than the original, the etching has obviously been too long and the shadows will have to be burnished to remedy the error. If the plate undergoes a quiet etching, the result is quite different from that in which the etching bath is kept in active movement or is brushed over the plate. In the former case, the side-way action of the bath compared with its perpendicular action is much less than the latter, for the movement of the bath or the application of the brush favors the etching of the open dots far more than that of the closed dots of the plate, as the first exposes many more points of attack than the latter. Through this intensified side action a brighter effect is given to all the tones, the etch taking place more slowly in the shadows and more quickly in the high lights."

New Sensitizer for Red Rays

The latest color to be recommended for staining dry plates and rendering them specially sensitive to the red rays is called "Pinachrom" by the makers, who are Messrs. Meister, Lucius & Bruning, of Höchst on the Main. Messrs. Fuerst Bros., of London and New York, are the agents. "Orthochrom T" is another sensitizer that has been recently introduced as being an improvement over all preceding ones, but "Pinachrom" is said by those who have experimented with both to be superior to it.

Spreading Technical Knowledge

The New York Board of Education, that gives popular lectures to the people closely allied with their daily labor, has decided to include photo-engraving and photo-lithography. The lectures are to be illustrated with stereopticon views and will go into all the details of the processes.

Sunlight for Color Work

As a general thing photo-engravers accept the idea that sunlight is best for making the filler negatives for three-color work. "It is and it isn't." A photo-engraver who attempts to work in sunlight must use a good deal of judgment or he will have a great deal of trouble, unless it happen that a train of luck is following him. Sunlight varies more than arc light, and it will not do to trust your eye to tell how white the rays are. Of course it's a pretty good idea to make the negatives in the middle of the day when the sun is highest, but even then there is liability of error. Arc lights contain too many violet rays and ordinary daylight contains too many yellow rays, both of which have their effect on the color screen negative, as can be proved by exposing the same copy under the two conditions through a yellow screen. With a red screen the difference is more decided, but that is not necessary to a test. The only exact method of testing the sun's rays is with the spectro-scope, but of course such a piece of apparatus is out of consideration in an engraving shop. What the engraver wants is to find out when his light is at the point that he knows suits his color screens. The simplest way of doing this is to get a piece of orange-colored glass, cut to fit a 4x5 printing-frame. Place this in the frame and on top of it put an ordinary negative of good quality, landscape preferred. Now put in a piece of solio paper and make a good, strong print, watch-

ing carefully to see how long it takes. If you then make a set of negatives and find them to be all right, you will have a standard for all future work. A few trials with this simple arrangement on different days will soon show what a great difference there is in sunlight, even when none is apparent to the eyes.

Three Colors at One Impression

At last a press has been perfected that will print three or four colors from half-tone plates at one impression; or to speak more correctly at one "travel" of the press, for, of course, there are as many impressions as there are colors but the paper goes through the machine only once. This remarkable machine, the invention of Harvey Dalziel, Plough Court, London, England, has been on exhibition in the British metropolis for about a month and the work turned out is a surprise to the printing fraternity. Some printers were so surprised at seeing a white sheet of paper put into the machine and in a few seconds later come out with a beautiful picture in all the hues of science that they were even incredulous. One printer said it must be "magic" and would not believe he was not being "faked" until he marked a sheet before putting it into the machine to avoid substitution. In general appearance this machine resembles several cylinder presses all bunched together, but from all accounts it is really the inks they use and their method of putting them on that is the "secret" of the process. The general American process of yellow, red and blue seems to have been abandoned. If three colors are used the new machine begins with blue and follows with the red and yellow. If four colors, they begin with the black or tint and follow with red and blue and finish with the yellow. These new inks are said to be absolutely transparent and as a consequence can be used in almost any order the printer desires. In reality it has been the opacity of the yellow that compelled printers to proceed with yellow first. But yellow is a bad dryer, so the new machine prints the yellow last and thereby avoids excessive dampness at the start. The work produced by this machine is certainly far above the average turned out in the ordinary printing office but does not come up to the work of the specialists. However, the machine is new and perhaps that will be remedied. And when it is the passing of the black and white picture will have begun.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY
114 Geary Street, San Francisco

Entered at the Post Office in San Francisco as second-class mail matter
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CAMERA CRAFT PUBLISHING COMPANY
114 GEARY STREET SAN FRANCISCO, CAL.



This reproduction is from a 7x10 blue carbon print by the Editor of CAMERA CRAFT. The negative was made from three positives: The figure and large tent, from a negative made at Buffalo Bill's show while in San Francisco. The next tent and part of the background was copied from a print by R. W. King, of Moscow, Idaho, while the smaller tent, and the remainder of the background are from a camping scene taken by the Editor in the northern part of the State. While not perfect as a composition and undeniably lacking in truth, it may be done by selecting and combining material otherwise having little interest. The absence of a figure rendered Mr. King's picture uninteresting, while the including of the buildings and the subject as secured in San Francisco, slightly incongruous, to say the least. The night treatment was determined upon as best suiting the subject and at the same time necessitating less hand work in concealing the joinings.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX

SAN FRANCISCO, CALIFORNIA, OCTOBER, 1904

No. 5

How a Pinhole is Made

By HENRY BOWÉ



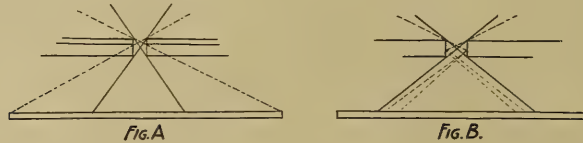
ONE of the most interesting and pleasing diversions for the amateur is that of pinhole or lensless photography. The majority have but a faint notion of what is meant by this, and associate with it some view taken through a good sized hole in a card or diaphragm and the resulting picture a crude effigy of the subject so photographed.

It is now admitted by the best authorities that "artistic pictures" can be secured with a pinhole, and I have seen work obtained in that way; work which it was hard to believe was not made by a good lens. Most examples of the work attempted by amateurs have fallen far below this standard. The cause of failure in the direction indicated can be laid to a poorly constructed pinhole. It is easily seen why this is so by comparing the pinhole with a lens.

Take one that is cheaply constructed and compare it with an anastigmat lens and you have an explanation. The pinhole is your lens and on the way in which it is made depends the success of your efforts.

The usual method employed is to drill a very fine hole, the size of a No. 11 or No. 12 needle, through a piece of brass or metal and have it finely beveled and polished from both sides to insure accurate definition. While this may be simple to a jeweler or kindred mechanic it is impracticable to most amateurs, and unless the person to whom the work is intrusted is familiar with the purpose for which it is intended the expenditure may be for naught. I will in this article describe a way of making one's own pinhole plates in such a simple manner that no previous experience is necessary. There are a few points I would like to impress on your mind before you start, that any danger of failure may be minimized. In the first place the tiny hole must be absolutely smooth and round, as the least trace of rough edging will spoil the sharpness of the picture. Each ray of light being round, it must be undisturbed in crossing the others on passing through this limited opening. Also, the piece of metal employed must be very thin, for by being

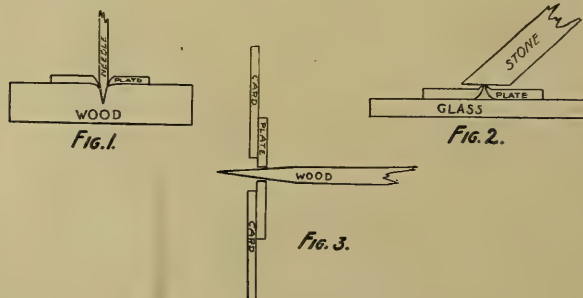
so there is less to obstruct and less to be removed in widening the angle of the aperture. (See Fig. A.) The edges can safely be thinned down to one five hundredth of an inch. Again, the pinhole, like a lens diaphragm, ought to be of a given size, both for convenience of timing exposure and adaptability to various subjects to be photographed. Use a No. 8 needle hole for outdoor portraits, No. 10 for average landscapes, No. 11 for fine definition in landscape and interiors, and No. 12 for copying and still-life in general. Lastly, the pinhole must be free



from reflecting or brightly polished edges, for no matter how slight, such would readily hamper and reflect disturbing rays of light on the plate. (Fig. B.) All this may look very formidable in print, but the few simple directions given here, if followed, will give you a perfect pinhole plate.

To begin with you need a thin sheet of metal, preferably copper or bronze, a hard, smooth piece of wood, a soapstone or slate pencil with one end ground off flat, a sheet of glass, and a No. 5 needle; a No. 10, a No. 11, and a No. 12 needle will also be required in sizing the holes. Take all your fine needles and push the eye end into a thick match stick for a handle and convenience. Your metal plate you had best secure of a jeweler. Have him anneal a one-cent piece and roll it flat until it is about nine inches or more in length. It will then be about one three hundred and fiftieth of an inch in thickness and can be readily pierced like paper, although firm enough to remain flat.

Having cut your metal sheet into small pieces to suit your fancy with a pair of scissors, lay one of them on the flat piece of wood and using the No. 5 needle press the point sufficiently through the metal to leave a hole which is barely dis-



cernible on the other side. (Fig. 1.) Put the metal plate on the glass and with the flat part of your pencil, stone or grind down the little burr that was



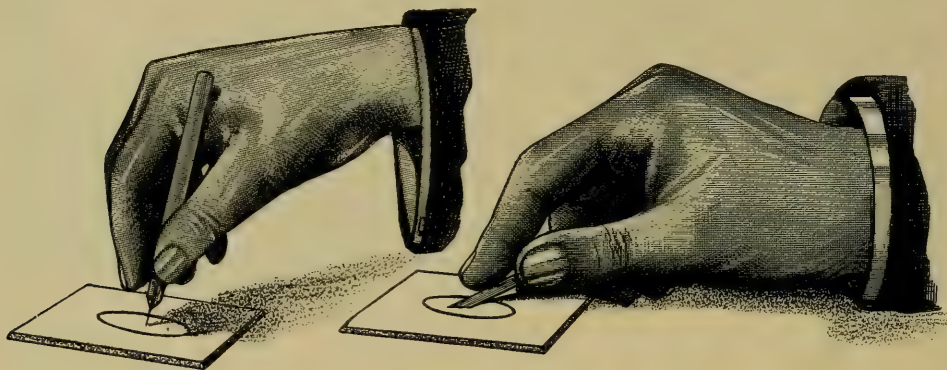
TEA FOR ONE



INTERIOR OF MACHINE SHOP

formed on the back until it is perfectly smooth on both sides, using a little water as a lubricator while stoning. (Fig. 2.) Then take your No. 12 needle and twirl this into the hole from both sides to enlarge it. Lay the plate on a card to keep it flat. (Fig. 3.) Do it very gently and only a little at a time, do not hurry, and stone down from both sides after twirling the needle in the hole. Finish the hole with the size needle corresponding with the number desired, viz: a No. 10 needle for a No. 10 hole, and so on.

Stone down after each enlarging of the hole, keeping stone wet. Both these items are important. When the pinhole is finished take a small, hard piece of wood (a toothpick will do), and sharpen it to a very fine point. Put on a little polishing substance which you may have handy, some of the soapstone pencil



grinding can be used, and, inserting point carefully into the pinhole, twirl round and round very gently to smooth and polish. (Fig. 3.) Clean out the pinhole carefully with a new and clean point and after wiping with a soft rag or paper, blacken the whole by exposing to sulphur fumes or by using a ten per cent solution of potassium sulphide. This to insure against reflections. The plate can then be put between two cards with holes one fourth of an inch in diameter cut in both of them and pasted together which makes it safe and easy to handle them. Keep the pinhole free from dirt and dust and you will have results that will be both pleasing and instructive.

Herewith are shown a few examples of work done with pinhole plates in place of lenses. In "Tea for One," the subject was in a very strong light, almost direct noonday sunlight. The table is black mahogany, teapot black, pitcher tinted yellow and green, and the cup and saucer white with colored ornaments. "A Mountain Road" was given an exposure of one minute with a No. 11 needle hole, six and one-half inches from the plate, at 11 A. M. on a "hazy-bright" day in May. A fast plate was used and found much over-exposed. The "Interior" is perhaps the most interesting. The floor, walls and ceiling are all dark, the first black, and the machinery little better. The glare of bright light from the windows would have made such results as have been secured very problematical with a lens unless special care had been taken to screen the windows. This is one of my first efforts and no record was kept of the length of exposure or size of the hole employed, although it was either a No. 10, 11, or 12.

The Manipulation of Platinum Paper

By W. E. DASSONVILLE

In an article which appeared in these pages recently, the successful treatment and working of old platinum paper and the saving of over and under-exposed platinum prints was so thoroughly treated that nothing further in that direction seems requisite. It is my purpose in the present paper to set forth the possibilities of the platinum process, treating the subject from a different standpoint. Upon the regular or "black" papers, colors may be obtained ranging from a very cold to a very warm black. A most beautiful red or green may be secured by simply toning the print; a sepia color can be obtained by the introduction of bichloride of mercury into the developer. Moreover, prints of a greater or less contrast may be made from the same negative by altering the developer, by manipulation in printing and by other means. It is to this side of platinum printing that I shall give my attention.

When it is desired to give to the print that sense of warmth felt in late afternoon and twilight landscapes the sepia color obtained by the hot developer or the use of mercury is best suited. These varying shades of sepia will also be found pleasing for many portraits. The red color is particularly adapted to sketchy effects both in portraiture and in landscapes, suggesting as it does red crayon. The green is not so suitable for landscapes as might be supposed but for marines it probably answers better than any other color.

These formulæ have stood the test of my every-day practice for several years. They have in my hands been found the simplest and most suitable of a great number of published formulæ which I have given careful trial. Since it is impossible without illustrations to show the exact colors and gradations obtained it would be advisable for the worker wishing to fully avail himself of the processes outlined, to make up a set of prints, showing the different results obtainable from the same negative. Such a set of prints will permit him to make an intelligent selection of the process most desirable in any given case.

RED OR GREEN PRINTS

To make a red platinotype, proceed as follows, making up three solutions:

- | | | |
|--------|------------------------------|---------|
| No. 1. | Uranium nitrate..... | 48 grs. |
| | Glacial acetic acid..... | 48 min. |
| | Water | 1 oz. |
| No. 2. | Potassium ferricyanide | 48 grs. |
| | Water | 1 oz. |
| No. 3 | Ammonium sulphocyanide | 1/2 oz. |
| | Water | 1 oz. |

When ready to use take one part of each solution and add 100 parts of water. In this final solution place a finished print; one developed, cleared and washed.

It will immediately commence to tone to a color termed Bartolozzi red; the longer the print is immersed the darker the color will become. When the desired depth of color has been obtained remove the print, washing it in several changes of water made slightly acid by acetic acid, and then dry.

These acid baths are important since the slightest trace of alkalinity will entirely remove all of the red color, leaving the print as it was before being toned. It may be seen by this that should the print be toned too dark it can be cleared of its color by being rinsed in water to which has been added a small amount of any alkali. After this the print may be well washed and again toned to the color desired. When mounting prints which have been toned with nitrate of uranium it is advisable to add a few drops of acetic acid to the paste used.

To produce a green platinotype, tone the print red as just described; rinse in an acid bath and then immerse for a few minutes in a bath of bichloride of mercury; 18 grains to the ounce of water. From this bath the print is transferred, without washing to a solution of trichloride of iron, 10 grains to the ounce of water. In a few minutes the desired color is obtained. The print is then well washed in several acid baths and dried. It is generally supposed that prints treated in this manner are not permanent, but some prints made about four years ago show no signs of deteriorating.

INTENSIFYING PLATINUM PRINTS

It often happens that prints when finished are too weak and, ordinarily, are thrown away. Such prints are easily saved by intensification. Make a solution of:

Hydroquinone	2 grs.
Citric acid	60 grs.
Water	3 ozs.

When the chemicals are entirely dissolved add 10 grains of nitrate of silver. The platinum print is placed in this solution and allowed to remain until sufficiently intensified when it is removed, given a slight washing and fixed in a weak solution of hypo after which it is well washed and dried.

SEPIA PRINTS BY THE USE OF MERCURY

The introduction of bichloride of mercury into the developer changes the resultant color from a black to a sort of sepia. The amount of mercury required depends upon the effect desired and also upon the paper which is used. As a general rule, with the American platinum, from one quarter to one tenth of a grain to the ounce of developer will be sufficient. With the Willis & Clements' paper, from one to one and a quarter grains to the ounce will usually be found necessary. Using greater quantities than these produces a rather disagreeable color and it will also be found that the greater the amount of mercury used the less the half-tones are preserved. Prints treated in this manner have one great drawback: they are permanent only when the iron contained in the paper is entirely removed by the acid baths, but washing the prints in these baths has a very strong tendency to remove all traces of the sepia color, owing to the action of



PORTRAIT STUDY ON PLATINUM
by W. E. DASSONVILLE

the hydrochloric acid upon the mercury. A print developed in a mercury developer will have lost all its color by the time the iron is entirely removed if an average strength of acid clearing bath be used.

The only way which I have found to overcome this difficulty is to leave the prints in the developer for at least four minutes, thus giving the mercury plenty of time in which to act, and then clear the prints in three weak acid baths of: muriatic acid, 1 ounce; water, 200 ounces. By following this course the loss of color will be very slight and the iron will be entirely eliminated.

EXTREME CONTRASTS, COLD AND WARM BLACKS

It often happens that for some reason a print very strong in contrast and cold in color is desired. To secure this, the following developer answers admirably:

Neutral oxalate of potash.....	16	ozs.
Phosphate of potash.....	4	ozs.
Sulphate of potash.....	$\frac{1}{2}$	oz.
Water	100	ozs.

The solution should be used cold and the print immersed as usual. The length of time required to develop is at least five minutes, the image appearing and developing very slowly. After development the prints should be rinsed in the three customary acid baths of: muriatic acid, 1 ounce; water, 50 ounces. In mixing up formulæ containing neutral oxalate of potash the oxalate should be first entirely dissolved and the solution then tested with litmus paper. Should it prove acid, neutralize with carbonate of potash; if alkaline, slowly add oxalic acid until neutral.

Another method of securing greater contrast without at the same time producing cold blacks is to place a piece of blue glass over the negative while printing. As it is difficult to procure such glass entirely free from spear points and bubbles it is advisable to paste over one side of the glass a piece of French tissue-paper. With the papered side toward the negative place the glass over the printing-frame, never in contact with the negative. By this means the shadows from the bubbles are prevented and the print will show no mark from them. Using the developers which are supplied by the various manufacturers of platinum paper one generally obtains a medium gray print when they are used at a normal temperature, say 70 degrees Fahrenheit. By heating the developer, even to the boiling point, the color becomes warmer, varying according to the temperature of the solution. The increased temperature of the developer plays another important part by materially reducing the contrast of the print. By holding the print over the steaming solution before developing and until the surface has had an opportunity of becoming slightly moist, a still further decrease in contrast will result. Another method of producing a print with lessened contrast is to remove the paper from the tin the evening before printing and allow it to remain over night without the package of preservative, in a closed drawer. The paper will become slightly dampened and give, when used judiciously, beautiful soft effects without the warm black color produced by the use of a hot developer.



ROTTERDAM

Camera Jottings

By DR. H. D'ARCY POWER

PART II

On leaving Montreal the steamer descends the St. Lawrence through delightful river scenery, which at Quebec affords many opportunities for good exposures from the boat. On awakening the second morning we found the ship almost at a standstill, and going on deck met an unexpected sight. As far as the eye could reach on every side was one vast and unbroken field of ice; masses of all sizes and shapes from a few feet to several hundred, floating flat in the water or piled on one another. Here, snowy white, there, emerald green, and at other places shot with all the prismatic colors of an opal, they formed a marvelous picture. Soon we had on deck a wondering and rightly nervous crowd. We were in an immense ice-floe; a portion of the great northern pack that is forever moving to destruction in the warm seas of the south. For fifty miles the ship slowly forced its way through this mass, the bow would strike a huge block a dull thundering blow and it would part into a great chasm of deep green twenty feet or more in depth. It was a beautiful sight and I regretted that there was no means of recording it photographically. Nor was it without danger, for there was always the possibility of the ship breaking instead of the ice. All the photographs taken of the floe were made with a color screen at one twenty-fifth of a second. In this way very good results were attained. Late in the day we worked right through it, and once more began to move at a good rate; but awakening in the night I found the ship again going dead slow. The ice-pack had given place to even more dangerous icebergs, some enormous specimens of which lay on the horizon. Fortunately or unfortunately according to the standpoint we did not get near enough to secure a

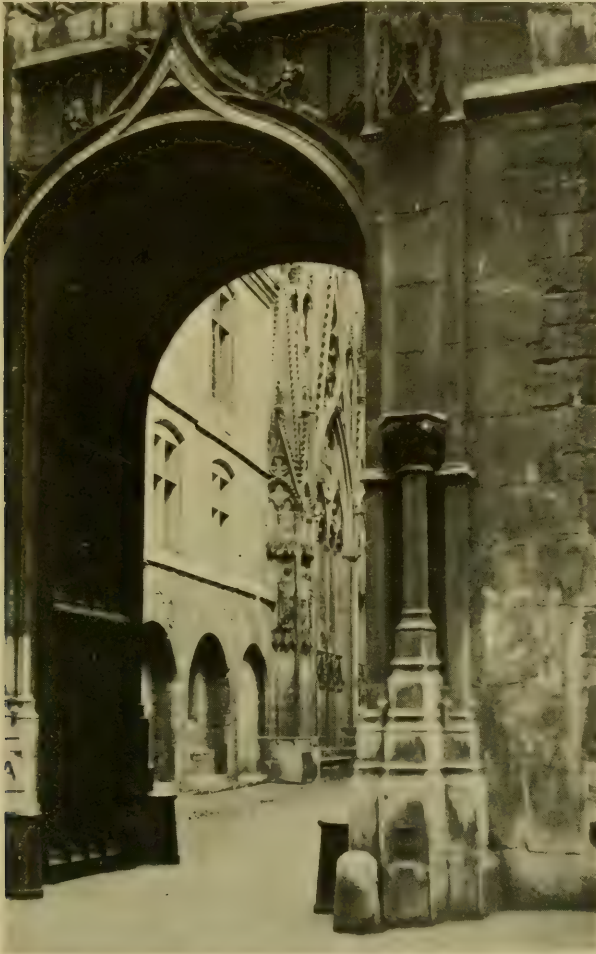
photograph. After clearing the ice there was little of photographic interest until the Irish coast was approached when an afternoon of wonderful clouds and a brilliant sunset gave opportunity for work. Of England, its photographic possibilities and activities I propose to speak in another letter. After three weeks spent in London I took the train to Southampton and the night steamer to Le Havre. The mouth of the Seine has little of interest but the whole country from here to Paris is full of good things for the pictorialist. Wood and dale, quaint old villages and oddly shaped thatches abound; but time pressed and we had to pass them by, nor halt until we reached Rouen. It is extraordinary how often tourists rush past this glorious old world city in their hurry to reach Paris. But what an error! The capital of the Norman conquerors of England, where rests the dust of Rollo; the place that saw the martyrdom of the Maid of Orleans is still a remnant of a bygone age. Its narrow and picturesque streets, its quaint churches and the glorious fanes of the Cathedral and St. Ouen belong to another period, and bid defiance to the ugliness of a material age. We spent three days here, and wished it could have been three weeks or even months, so great are its possibilities to the photographer. From Rouen to Paris the line follows the Seine, and there are many chances for flying shots at the beautiful vistas that the stream constantly presents.

In Paris we spent many days but alas there was so much to do and see that the camera was largely cheated of its due. And yet Paris is a good photographic field, leaving aside its well-known sights and beauties, there are outlying districts, such as Sevres, where the photographer and artist may find an abundance of beautiful and picturesque material. Unfortunately I struck Paris at a time when its photographic activities were at rest. I visited the excellent quarters of the Photo Club and enjoyed a delightful chat with Major Puys and M. Demachy. I found in France as well as elsewhere in Europe a very general recognition of the good work being done by our Photo-Secession, but not without criticism of their attitude and standards. The splendid work done by Stieglitz in *Camera Work* is worthily duplicated in Paris by the new *Revue de la Photographie* which ought to be better known on this side of the Atlantic. It was interesting to note that quite a little of the pictorial work visible at the Photo Club was done on a machine-made gum paper known as "Fresson." The results were excellent. In France, Germany, and England various brands of machine-coated gum paper are coming into use—concerning which I hope to report later.

It is quite amusing to note that while that self-complacent egotist the author of *Pictorial Photography* is once more asserting in the *British Photographic Journal* the death of gum bichromate, every exhibition throughout Europe shows its growth among the proficient. I had the pleasure of going over some portfolios of M. Demachy's work and later in London saw the beautiful collection of eighty prints exhibited by him at the rooms of the Royal Photographic Society. Although an old gum worker and a stickler for technical standards in the use of this medium, the perfection of Demachy's work was a revelation to me. The whole gamut of chiaroscuro is shown in these works. Soft dream-like pictures built up of nothing but delicate half-tones, such as the girl's head (No. 62 and also No. 21) contrast with the most powerful effects of strong lighting, such as Nos. 19 and 52; yet shadow detail is not lost in these. As M. Demachy told me, his aim, so far as technique is concerned, has been to obtain pure whites and deep oily blacks and he has succeeded splendidly. He has not any patience with the gritty productions

so often exhibited at salons to the great detriment of a process that rightly worked and under favorable conditions can be brought as near perfection as any, and yield results impossible to other media.

After leaving Paris and spending a couple of days at Brussels, which, while full of queer old streets leading to nowhere and a really magnificent medieval market-place, is not exactly a promising field for the pictorialist, I went on to Aix la Chapelle and Cologne. The latter is famous for its cathedral, and for the



fifty-one individual and separate stinks that the poet Coleridge found there. It is supposed that by virtue of these and the law of action and reaction the famed eau de Cologne came into existence. I am inclined to think that Coleridge would be a disappointed man if he revisited the city for he would miss most (I cannot say all) of these old acquaintances. Photographically, Cologne is a rich field. The cathedral notwithstanding its enormous size and the purity of its Gothic architecture is not well placed for picture-making and inside it seems immense and bare. But what is lacking in the cathedral is atoned for by the quaintness of the narrow and ancient streets and the houses on the water front. Pressure of time made it



THE VYVER, THE HAGUE

impossible for me to do here the work I would have liked to have done, for I had to hurry on up the Rhine. This we did on one of the splendid river steamers, than which no better are to be met with anywhere. This is the only way for the photographer to see the Rhine. It is only from the body of the stream itself that the beauty of its enchanting vistas and the never-ending interest of its ancient towns and villages can be appreciated. There are two classes of steamers running on the Rhine. One, the "express" line consisting of palatial boats, going very fast and stopping only at a few important towns; the other slower and smaller boats stopping all the way along, and for an artist having time and wishing to make the most of the Rhine, much to be preferred. Over twenty years had passed since last I was on the river, and what a change those years have wrought on the peaceful German landscape. I may be mistaken, but when in the early eighties I was often up and down the stream I have no remembrance of smoke and factories; now the country right through from Belgium and up the whole left bank is seeded with them. Standing on the steamer near Neuwied I counted no less than thirty-two tall smoke-stacks visible at once. It is a remarkable demonstration of the growth and extent of German commercial enterprise. Notwithstanding all this the Rhine has lost none of its charm. Never have I seen the Drachenfels look more majestic, nor the many little towns more beautiful than on this June day. The latter have grown greatly in size during these years and new houses elbow their ancient fellows, but the architects have had the good sense to adapt modern improvements to the beautiful forms of our forefathers, so that the intrusion is not as objectionable as it might be. Even the great factories seem devoid of much of the ugliness that pervades them with us. The curse of the bill-poster is unknown, and the eye is not offended afresh with every change of view. I recently read the severe strictures of Horsley Hinton on the disfigurement of our scenery from this cause, and it is well to freely admit their truth, for only by a recognition of our defects can we hope to move the powers that be to the removal of a national scandal.



LOVE IN A DOG CART

From the Rhine it is an easy journey to Holland, in fact from the photographic standpoint it is a good plan to take a Rhine steamer from Cologne to Rotterdam, but as I had work to do in Belgium I returned to Brussels and went thence to Antwerp. The latter is a fine city and in the matter of "hustle" has little to learn from us. It doubtless has photographic possibilities, but they are not such as the passing tourist is likely to alight on. I went on next day to Rotterdam and arrived there at night. The entrance into the city over the canals and river after dark is a most beautiful sight; the thousands of lights on the dark waters fill you with thoughts of Venice; nor is the appearance of the town by daylight a disappointment. Rotterdam is not yet spoiled, its big dogs still drag round the milkcart as well as its big hulking driver; the old ladies are the picture of neatness in their quaint Dutch headdress; and the young women of the peasant class, often very good looking, still keep to the old national costume. Of the large cities, Rouen and Rotterdam have to me been by far the most interesting. It is strange that notwithstanding the survival of this earlier type of life Rotterdam is a very live city. I know of no spot in New York or San Francisco that is so brilliant with electric lights as portions of the High Street (Hoogstraat), nor have I seen anywhere a more active energetic crowd; there may have been a time when the Dutchman was slow, but there is no evidence of it at present. They can give us one lesson, they know how to run electric wires over a town without disfiguring it. In London, Paris and other places that are run by the people instead of by monopolies, the lines are put where they ought to be, namely, underground. Rotterdam has them overhead, but at such an elevation above the sidewalk, and made of such tenuous wire that they are practically invisible. Much of the interest in Rotterdam and other Dutch towns centers round the ever-present canals, and whether in town or country pictures of interest and beauty are to be found on every side. I would here give a pointer to visitors to Rotterdam. Take the car from the Exchange, marked Bergweg, and at the end of the line change to the one to Hillgersberg.

I will not promise that he will find any berg (mountain) or even a respectable sized hillock, but he will find, as I did, opportunities for picture-making every few yards. Whilst in Rotterdam it is usual to make a visit to The Hague, which apart from its picture galleries is not interesting and is a monotonously dull place. The Vyver and the old government buildings that surround it may be made to yield under proper lighting some good pictures.

Traveling on the continent of Europe two phases of professional photography will impress themselves on the visitor, namely, the ordinary work of the galleries and the immense business that is seemingly done in pictorial postcards. As to the former little praise can be given. Retouching is as badly overdone as here, and originality in pose or lighting is sadly deficient. I am of course speaking of the mass of the work. As to the postcards, whether they represent streets, historical buildings, natural scenery, such as the Rhine, or reproductions of the works of art in the galleries, there is undoubtedly a lot of good work being done; many of these doubtless are taken from the negatives of amateurs, and some give effects of the highest artistic quality. The man who invests fifty cents in postcards in every town he passes through will return to the States with a very useful album of the beauties of Europe.

(To be continued.)





Filtered Sunlight

By PRESTON E. ANDERSON

I have always had a strong liking for sunlight effect. No phase, no mood, no aspect that Nature presents to us, her children, so strongly appeals to me as that of smiling sunlight. Not the broad and overpowering sunlight of the open field; not that other extreme, the light that seems to ask permission of the clouds to favor us at uncertain intervals of varying length. Neither of these suggests sunlight as the topic, be the rays of Old Sol ever so strongly in evidence. With sunlight falling upon the scene uninterrupted and unstinted, only heat and inconvenience is suggested. The contrast of gratifying shade is wanting. Where so distant a factor as floating clouds affords relief the effect is lacking and our sunlight assumes but a secondary position. How different is the result when the branches of a tree are allowed to intervene. We feel the sunlight is as unstinted as the air, we are confronted with no feeling of inconvenience and with no fear that its delight is but that of a passing moment giving place to a less cheerful aspect.

Attempting to portray this sentiment, this feeling of gladness which only sunlight can convey, the camera-worker is at once in danger of violating all the traditions of his craft. He is advised that only spottiness will result. The background is too distracting he is told, when attempt is made to introduce figures into his composition. The lack of breadth is deplored. A thousand reasons are given

to prove that pictures and his results have no relationship. He is told to choose an earlier or a later hour. The shadows are then much longer, the masses will then be broader and the composition more pleasing. All idea of the sentiment to be reproduced is lost. What matters it if evening shadows fail to suggest sunlight and the gladness which it gives to Nature's smile? The composition must not be allowed to violate the rules.

Pages have been wasted in discussions as to the best method of portraying the effect of warm and pleasant sunlight. We have been told that lack of detail in the shadows would not answer. We have been as emphatically assured that only contrast would achieve the desired result. Be the advice along what line it might, it always ended with a stern admonition that spottiness should be avoided. It can be but the impossibility of securing studies without spottiness that has driven our

sistently avoids such ploy their cameras transcripts of those that more easily breadth of treatment as a requirement is more pleasing should we not in a of our interesting advantage as our

With this plea portraying the sunlight at noon—if you will, I will tures, photographs and ask your kind their merits. They that the stickler centration, composition both mass and impossible; but at the same time, they suggest to one as no other effect could hardly do, Nature in her most smiling mood. If lack of cutting sharpness can invite the imaginative play that gives one picture a more than momentary interest, can not a lack of set design in line and mass do much in the same direction? We are told that such-and-such a picture is but a record; it is seen and digested at a glance. Feeling is entirely lacking because there is nothing left on which the imagination can be allowed to play. Can the same condemnation be made of the examples shown herewith? I fear they cannot, at least, not in so sweeping a sense as our worshippers of breadth, of well-arranged masses and correctly placed lines, would like.

These pictures are not the work of a past master in the use of a camera. Neither are they the results of employing special plates or other inconveniences. They are but the work of one who finds delight in using his camera as a means of recording those aspects of nature that have most appealed to him; in portraying such scenes as have given pleasure to his eye and in attempting to convey to the



workers to so per- subjects and em- in the making of phases of nature permit of that ment so insistently ment. As sunlight than shadow, larger proportion work employ it to theme?

for more pictures glories of sunlight, day in midsummer show a few pic- only if you must, consideration of are all subjects after breadth, con- sition as applied to line, would deem



minds of others the charm which they so surely possessed in the reality. In doing this he has the good fortune to be entirely untrammelled by any of the traditions that too often claim a none too certain kinship to art. An artist in all that a love of true art implies, the maker of these few pictures has shown that too blind a following of the rules so generously supplied to us as practitioners of a lesser art is not conducive to a full enjoyment of all the pleasure that our cameras are capable of affording. The four or five reproductions here shown are not selected



as examples of the utmost possibilities that lie in this direction. Neither is it claimed that they possess artistic merit of so great a degree that salon walls alone would make a suitable setting. It is, however, not a great task to imagine that they can give delight, can interest, can even convey to other minds that feeling of the pleasure which the scenes themselves gave to the maker of the pictures. May we have more of the same character and less of the more dreary effects so much more popular with camera-workers of the present time, be they less artistic if they will.

Bromide Work

By E. N. SEWELL

PART III

Exposure

Having determined the correct focus (which as indicated in the last article, need not be *exact*) and decided just what you want out of the image projected on the screen, you are prepared for the next step—exposure.

The diaphragm should remain set at the opening you intend to use, say F/16, and left open all the time. A cap should be provided for the lens made of pale yellow or red glass, the ordinary “ray-screen” or “ray-filter” is just the thing if not too light in color. It should be light enough to transmit sufficient light so that while it is in place you can get a good idea of the projected image on the screen and at the same time be non-actinic enough so that the bromide paper will not fog by its light. It may be tested by allowing the light from it to fall on a piece of bromide paper for say one minute with a soft negative in place. If this piece of paper is developed in entire darkness for one minute in normal developer, and shows no fog or trace of the image, your cap-screen is all right; if the paper has received any exposure get a darker screen. With a proper cap-screen in place and the image projected you may safely pin the paper on the easel just where you want it.

The best pin to use in fastening your paper to the easel is the ordinary black steel pin with a round glass head—the kind that comes in pasteboard cubes and is sold in dry-goods stores. In fastening the paper to the screen or in handling it at any stage, be careful not to touch the sensitive surface with the fingers. There is always enough dampness or oil on the fingers to do the paper harm. Always place a small sheet of some other paper between the sensitive side of the paper and the fingers. If the paper is held too long in the hand the warmth of the fingers will cause dark spots to appear in development.

Test exposures should always be made on strips or small pieces out of the same envelope of paper you are going to use for the finished enlargement, for while the speed of a certain brand of paper is a fairly constant factor, there is frequently enough variation between the speeds of different emulsion numbers to upset calculations. Take a strip, say one inch wide of the full length of the paper, or as long as the diagonal of the intended enlargement, and pin it on the easel in such a position that it will catch some of the extremes of high light and shadow. Now expose by removing the cap-screen—don't take the screen off with a jerk, as it may disturb the focus or set up vibration in the lens-board that will spoil the sharpness of the result. I recommend an exact focus for the first test, as from it you can judge how much diffusion would improve it. I *do not* recommend the usual procedure of exposing parts of the test strip for various times, say five to thirty seconds in five-second stages. The better plan is to give the whole strip one exposure for what you think will be about the correct length of time. This can be learned only by experience, but you may start with about twenty seconds if the negative is of fair quality and with stop F/16.



PORTRAIT STUDY
by E. N. SEWELL

Experience will, after a while, enable you to make fairly close guesses, but a careful worker seeking the very best results will always make one or two test exposures before taking chances on wasting a whole sheet of paper. The test strip exposed, it should be developed in the same solution that you intend to use for the finished print. A normal developer such as is recommended by the manufacturer of the paper, should be used. (The subject of development will be fully treated in its proper place.) Proper or normal development should take place in about one minute with a normal developer; if it drags much beyond that time, under-exposure is shown; if the image flashes up, over-exposure is indicated. The remedy is obvious in either case. I have suggested that the strip be so exposed as to include if possible the extremes of high light and shadow. If in your test exposure the shadows are over-done and the high lights under-done, you have a hard task ahead of you and had better try a new negative and leave the other until you have become expert in modifying exposure and development. A negative of fair gradation will, with proper exposure, give you good clear shadows and some tone in the high lights, and test strips should be exposed and developed until you are sure you know the right exposure to give on a full sheet, and not before.

The beginner had better read the chapter on development before making any exposures whatever, but *until he is pretty well used to his work should try nothing but the normal developer recommended by the paper manufacturer.* In photography, as in everything else, it is trying the "fancy steps" before properly training up to them that brings failure and discouragement. If you wish to get the most out of your tools and material go slow and don't try to see if you can skip a lesson. In learning to make enlargements choose a negative without great extremes, but not a "soft" one, and stick to it with normal developer until you get your result, and rest assured any failure is "up to you," and the chances are that it lies in your exposure. The best result is always from the correct combination of exposure and development. You know the correct development—find the correct exposure. And that is one that will come up gradually and evenly in the developer and be "ripe" *only* when the developer has ceased to act, that is, when all the silver that has been acted on by the light during exposure, has been reduced.

Control, or modification of exposure, will not be treated fully in this chapter as it is a subject in itself, but a sky that has clouds in it but which is too dense to print in the same time as the foreground can be brought out by shading the foreground or that portion of the picture that has had sufficient exposure while the sky is being exposed for a longer time—sometimes five or six times as long. Even if there are no clouds to print out the sky should be a light half-tone in the print, and as the sky portions of ninety-nine per cent of our negatives are so dense as to give only blank white paper under ordinary conditions care should be taken to print out the skies to a slight degree by longer exposure. The proper way to do this is to hold a piece of cardboard (any old thing will do) between the lens and the paper during exposure. The edge of the cardboard should be roughly shaped to match the irregularities of the sky-line, and during the time of interference should be kept in constant motion in a position fairly close to the paper, say two or three inches. The slight distance from the paper and the constant motion will result in sufficient diffusion to prevent the print giving any evidence of having been

dodged. High lights other than the sky may be treated the same way, but will require more care on account of the more unequal distribution. Unequal illumination, indicated by under-exposure at the corners and ends of the print, may be overcome in the same way, but in this case the cardboard should be held in a position about half way between the lens and paper so as to gain greater diffusion of the light. Each corner or end of the print should be dodged separately until the whole print has been given full exposure. The cardboard should be kept in constant motion and its position continually shifted. Work from one corner to another and back again by degrees, or go on around the entire print two or three times. In dodging for the sky the cardboard may be held much closer to the paper than in most other cases, as the sky-line itself is always pretty sharp and the dodging is simply for the purpose of printing out the sky over it and just enough diffusion is needed to conceal the means by which it is accomplished. Too much diffusion would result in over-printing just under the sky-line, or in under-printing just over it. The latter is the lesser evil.

Unequal illumination is caused by the light not being sufficiently diffused, but with an ordinarily good outfit will not be noticed much, if any, while using small negatives, but will be more marked as the size of negative used approaches the diffusing power of the ground glass, or of the condensers. Working with a smaller diaphragm helps to reduce these inequalities. If the camera you are using to enlarge with has a rising and falling front it may be used to equalize, or to take advantage of unequal illumination, for, by dropping the lens from its normal position the foreground is placed in the zone of the weakest light while the sky is brought to the center of illumination. A high light or a dense portion of the negative that occurs at either end or at the bottom may be printed out in the same manner as is recommended for the sky, but if it occurs anywhere within the margin, must be printed out by cutting a hole in a piece of cardboard and using it as a vignetter. The hole should be roughly shaped to match the high light to be printed out, and the cardboard held about half way between the lens and paper so that only such light as passes through the hole may reach the paper. At the same time the cardboard should be kept in motion so as to increase the diffusion of the light. If the edges of the high light which needs this treatment are fairly sharp the vignetter should be held quite close to the paper. The relative sizes of the holes to be cut in the cardboard and the other tricks in this line can be learned only by experience and considerable waste of material, but as perfection of gradation in negatives is as rare as perfection in most other things in this life, the operator will soon learn that such treatment is not only legitimate but necessary in order to get the best results, besides it is in just such things that you can learn to beat the other fellow. When such details have been mastered you are ready to give attention to the means by which artistic effects may be gotten through proper modification and combination of exposure and development and choice of paper, but mostly of common sense, but these will not be touched on in this series which is intended to be more or less elementary. The "fancy steps" will be left until some other time.

If a good many prints are to be made from one negative the paper may be placed in a printing-frame of the same size, either with or without glass in front of it (glass is not necessary to keep the paper flat in size $6\frac{1}{2} \times 8\frac{1}{2}$ or smaller). The frame can be rested on a box, or something placed against the easel, and a pin or mark on

the easel will insure the same position for each exposure, thus saving the worry and waste incident to getting the paper always in the same place when pinning it to the easel in poor light. This means of holding the paper in position may be taken advantage of to secure correction of distortion. If an enlargement is to be made from a negative with the buildings on opposite sides of a street leaning toward each other, or similar distortion, the evil may be corrected in the print by inclining the printing-frame holding the paper in the opposite direction until the lines thrown thereon are correct. This will necessitate using a very small stop in the enlarging lens to get the necessary depth. This is a trick that I have quite successfully accomplished in making prints from a negative that shows such distortion and which could not be made anew.

In printing from weak negatives on ones which have not enough contrast a light yellow screen should be used in place between the light and negative preferably, or in any position where any imperfection in it will not be focused into the print. Even a slight yellow stain in the screen will have a marked effect. It must be remembered that the yellow light requires a much longer exposure and proper allowance made. On the other hand, harsh contrasts may be reduced appreciably by using a light blue screen in the same manner as indicated for the yellow screen.

These methods of increasing or reducing contrasts are indicated for extreme cases. Ordinarily the same, or nearly the same results may be gotten by modifications in exposure and development. In working with a weak negative the light may be weakened or softened by interposing more ground, or by increasing the distance of the light behind the condensers or ground glass (the light-box may easily be so constructed as to allow of this), or by shortening exposure, or by all of these expedients followed afterward by contrasty development. In printing from a negative that is too high in its contrasts the direct opposite of the procedure just indicated is to be followed.

It should be noted here that if one is to go so deeply into photography as all this, one must do a good deal of thinking and feel that the result is worth the effort. Aimless pottering will not bring the results and will waste more material than one can well afford, while with some thought and careful work one's leisure hours may be so improved as to produce results that will delight the eye and beautify the home for a life-time.

The Evolution of Photography

By G. C. KEENEY

Secretary California College of Photography

The time is fast approaching when the standard of work demanded of the photographer will be much higher than the average of today. Photography is both an art and a science, and the public is beginning to judge it from an art standpoint. A few years ago everything was excused as being "only a photograph." This condition of affairs has almost disappeared, and work unworthy to be called art is being rudely pushed aside to make room for the more meritorious productions. The saying, "There is always room at the top," is doubly true of all branches of photography.

The coming photographer must be educated and trained in his profession, the same as doctors, dentists, lawyers, and other professional men. Assistants about the studio will not be able to hold their positions with only a meager knowledge of the processes through which they are required to carry the unfinished photograph; but will be required to know the chemistry and manufacture of their materials. Their knowledge must consist of a thorough, scientific understanding of the subject, rather than the simple directions that come with the various plates, papers, and other supplies.

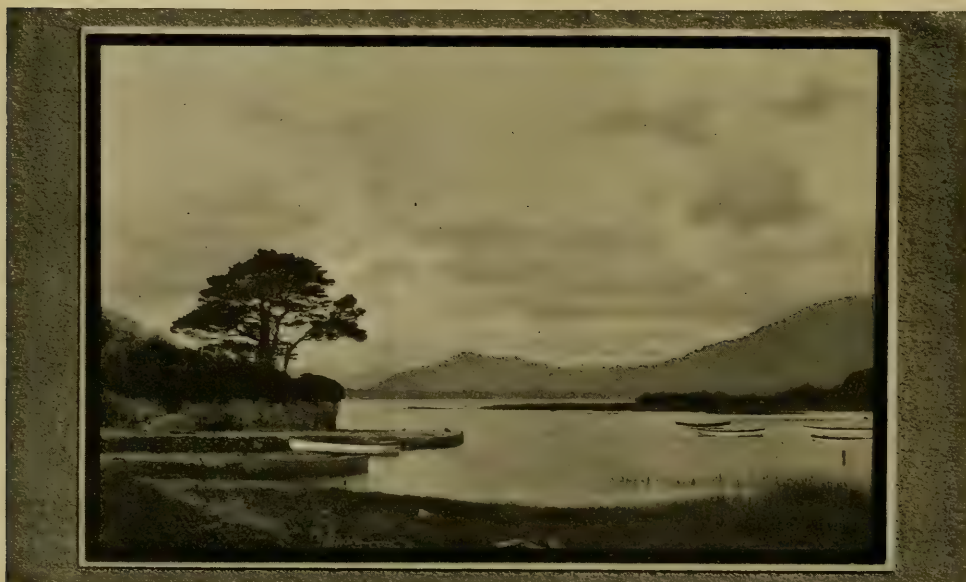
This state of affairs is fast being realized today, and the man that works by "guess and hearsay" is being crowded out by the man who has made the subject a study and "knows." As these changes advance, we will see more of the artistic and beautiful turned out by our professional friends, and less of that commercial product so common today.

Amateur photography is destined to experience even greater evolution than the professional. New attachments and conveniences, improved processes, that are simplifying the once cumbersome apparatus and methods, are being placed before us almost daily. The standard of work is rising, and the army of "button pressers" is diminishing.

Photography has proved itself of such value that its use has been adopted by most all scientific and commercial enterprises. The camera and its products are found everywhere. We cannot turn in any direction without seeing its magic influence manifested in some manner.

But this is not the end of the advancement. We see only the beginning. That photography will eventually be taught in all of our high schools and universities has long been foreseen by the leading authorities.

Camera clubs and photographic associations are playing no small part in placing photography on a footing with the other professions and arts. The man who is a member of one of these enterprising organizations should consider himself indeed fortunate.



CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX

SAN FRANCISCO, CALIFORNIA, OCTOBER, 1904

No. 5

The One Thing Lacking

I believe that the policy of CAMERA CRAFT, as carried out from month to month, is meeting with the approval of the vast army of camera-workers to whom it desires to appeal. I further believe that the wants of this body of enthusiasts, this large number of intelligent workers, are as fully understood by myself as they are by any other caterer to their wants. At the same time a more general expression of opinion from our readers would be of the greatest assistance and would be as welcome as any one who might so favor me could desire. CAMERA CRAFT is not printed for private distribution but to be sold to those who believe it worthy of their support. Let us talk the matter over. If you think that the magazine could be made of more value by a change in any way, write me and give your ideas. If any line that is being followed meets with your approval, advise me of the fact. In doing this you will greatly assist and at the same time earn the gratitude of one who has but one desire and that: To produce a photographic magazine as nearly perfect as is possible under the conditions.

Our Western Writers

The appeal made in a recent issue that a few of our Western workers make an effort to use their pen in behalf of their fellow craftsmen has resulted in several most praiseworthy attempts in that direction. The article by Preston E. Anderson in our August issue was copied by several of our foreign exchanges and an article by Mr. Ogilvie in the same number has received almost as much approval of a like kind. Both of these writers will be occasional contributors to the pages of CAMERA CRAFT, and if I can be of the least assistance to others who may have information to impart to their fellow workers, they have but to write. What is wanted is matter of a practical nature. Information that is concrete, not abstract, and of course on photographic topics. With something to offer along this line, the making of a readable article is not a difficult task. Can I help you in this direction?

A Praiseworthy Institution

The fall term of the California College of Photography will open a couple of weeks later than was expected, owing in a measure to the fact that the completion of the handsome new building which it will occupy, was delayed. The instructors who have been secured are the most competent. Every facility for thorough instruction has been installed. The location of the College is such that nothing but praise can be given for the foresight displayed in its selection. The gentlemen interested in the enterprise are all well known, not only in their own beautiful city of five thousand inhabitants but in the metropolis of the Coast, San Francisco, as well. The rates of tuition are as low as it is possible to make them consistent with the thorough instruction given. A handsome catalogue is in preparation and every person interested in perfecting his knowledge of photography should send for a copy.

Camera Craft Abroad

Dr. Power, the well-known and popular contributor to the pages of CAMERA CRAFT, has returned from an extended trip through Europe. While his extensive correspondence in German, French and English with the best workers abroad, extending as it has over several years, assured him that CAMERA CRAFT was well and favorably known in the several countries which he visited, he was not prepared to find it so universally admired and so widely popular as he did. The value of its articles, the superiority of its reproductions and the excellence of its press-work he found to be the subject of general praise, not to say conjecture as to how it was made possible. That our efforts to produce a magazine worthy of our home-workers should result so successfully as Dr. Power's experience proves, is most gratifying. That our efforts will not be relaxed our readers may be assured. That the high opinion which has been earned abroad will be retained, let there be no doubt. High esteem is an incentive and while it is not needed in such a capacity it is none the less pleasing to find that we have so large a share.

Criticism of an Advertiser

It is rarely that I find it desirable to mention the use made of their space by the advertisers in the pages of CAMERA CRAFT, at least, in other than a private manner; but Mr. Waide has failed in no small measure to set forth fully the value of his "method" as being as applicable to the work of the amateur as to that of the professional. In this, his use of the space at his disposal is very faulty under the circumstances as is testified to by the large number of letters I receive from strictly amateur workers asking concerning this point, or later, thanking me for my assurance that the "method" was worth many times the cost of the treatise, even to the man who had no intention of doing work for other than his own pleasure. We wish all our advertisers to reap the full benefit of the publicity which our pages give, and trust that this will be a hint to others that a presentation of the merits of their offerings may not be lacking in some detail, to their own loss and our inconvenience through added correspondence so easily avoided.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

The Influence of Metals on Photographic Plates

A series of experiments dealing with the influence of metals on photographic plates is recorded in the *Photograph. Chronik*. A wooden dark slide containing a photographic plate separated from a sheet of metal by about 2 mm. was kept in the dark for some time, and on each occasion that the experiment was repeated the plate was found to be fogged. A newly made scratch on the metal caused the part of the plate immediately opposite to fog more rapidly than the surrounding parts. A sheet of printed paper was placed between the metal and the plate, and on development the lettering appeared clear on a dark ground. Magnesium had the greatest effect, then aluminum and zinc; iron, silver, platinum, nickel, etc., gave no results on the plate. These experiments do not differ materially from those carried out some years since by Dr. Russell, who satisfied himself that the effects were due to hydrogen peroxid.

The Swing-Back and Rising Front

As even hand-cameras are fitted with these requirements in this luxurious age, it is well to remember a few of their uses. The value of the swing-back in rendering vertical lines parallel when the camera is tilted is well known, but it possesses other advantages. For instance, when photographing a foreground study, such as a field of flowers, or breaking waves, the swing-back is useful in bringing the immediate foreground into focus without throwing out the middle distance. This may save stopping down, often a *desideratum*. The rising front again may be used in the converse case, when the foreground is too obtrusive, or is uninteresting, or when the tops of trees and

buildings are cut off. It also has its uses in photography up hill. It is as well to test both swing-back and rising front before setting out, in order to ascertain if the covering power of the lens allows their unlimited use.—*Jeff in Eng. Amat. Phot.*

Normal and Correct Exposure

It is pretty nearly accepted that a normal exposure is the correct one, but A. J. Anderson in a recent article on the pictorial use of the hand-camera points out that exposure should depend on the object to be obtained under given conditions, for example, if an object looks flat and requires accentuating or relieving, it should be slightly under-exposed; but if photographing an object in bright sunshine, it is better to over-expose and by soft development try to obtain the transparent shadows that sunlight gives.

The same writer makes a good suggestion in advising that when a picture is taken of a group of men or other moving objects, a second plate shall be exposed after they have passed, this latter to be used to print in from if any portion of the first require removing by blocking out, as may easily occur with overlapping or unnecessary figures.

The Relation of Color Screens to Stained Microscopical Objects

There is nothing of greater importance in the production of a good photomicrograph than the use of a color screen that shall give the largest amount of contrast to the stained parts. This practically means the use of a color in the screen that shall neutralize the stain color and produce black, or some color to which the emulsion is insensitive. The whole subject in so far as it relates to bacteria (and it would equally apply to most

histological specimens) has recently been investigated by Dr. E. J. Spitta, in a communication to the Quckett Microscopical Club, which is very fully reported in *Photography* for June 25th. Dealing with the question of increasing contrast, Dr. Spitta says:

"How can this be done? Let us take for example a blue-stained bacillus on a white ground. It is by staining a screen with such a dye that the blue color of the bacillus is obliterated—thus making it black—whilst it imparts to the background the simple color of the screen. To be able to take the photograph, however, one other point must be attended to, viz: that the plate selected for use shall be sensitive to the color of the screen employed. Here comes in the importance of knowing the "eye" of the plate it is proposed to use. Will it perform well in the color of the screen it is proposed to use?"

"In bacteriology the leading three dyes we have to find contrasting screens for are Löffler's blue, Gentian violet, and Carbol-fuchsin. Starting with the blue, we must next explain what is meant by the term "absorption band," as applied to any dye. When white light passes through a solution of a dye certain portions of the spectrum will be found wanting, their places being taken by a black or "absorption" band. It must be the duty of the photographer then to test each dye to see what color it absorbs; in other words, to know where these bands are situated. All dyes vary somewhat. To explain the peculiarities of all we have tested would occupy too much space, so we must be content with those we have selected, and show our reasons for such selection."

The final result of Dr. Spitta's investigation is that so far as objects stained with Löffler's blue is concerned the best contrast screen is one made with aurantia. "This latter is put into water until saturation occurs. After settling, the supernatant fluid is poured over, so as to cover thoroughly and evenly an immersed lantern plate that has been previously fixed and washed without subsequent drying. It should soak all night. Gelatine may be clarified and mixed with the dye and poured over a plate evenly, leveled, and allowed to set." Orange F is also useful, but not as good as aurantia. For Gentian violet the best screen is found to be one made of two thicknesses of Pot

green glass, and for Carbolfuchsin a single thickness of the same glass will prove sufficient.

How to Give a "Plate-Mark" Effect to Platinotype Prints

Probably no photographic process so much as the platinum, simulates an engraving so closely, especially if the picture be printed with a broad white margin. Indeed so exact an imitation is sometimes attained that it is felt that the similarity should be further extended by plate-sinking the image. This can be done in a variety of ways, of which, perhaps, the following is as simple as any. Print the photograph upon a larger sized piece of paper than the picture, say quarter-plate or 5 by 4 or half-plate, masking the negative so as to produce a clear cut margin and a broad white border. Then when the print is still wet, place a piece of cardboard, cut accurately about $\frac{1}{8}$ of an inch larger than the picture, against the face of the photograph, sandwich the whole between layers of white blotting-paper, and adjourn to the wash-house. On the top of the family mangle will be seen a turn-screw which tightens the spring governing the rollers. This should be screwed down to its utmost extent in order to get a maximum pressure, and the print then run between the rollers until it is nearly dry. Set aside, without altering the relative positions of print, cardboard and blotting-paper, under a weight till quite dry, when, on removal, a clean plate-sunk picture will have been produced. This device will be found of especial interest in the execution of book illustrations, book plates, and in copying pictures.—*English Amateur Photographer*.

Rapid Sensitizing of Carbon Tissue

Alcohol in the bichromate sensitizer, as an aid to rapid drying, was in use over a quarter of a century ago, and its value is emphasized by Herr Wergien (*Photographische Rundschau*, 1904, p. 148). The following is his method of working: Make up a stock solution of water, 100 c.c.; ammonium bichromate, 5 grams; soda crystals, 1 gram. Just before use this is mixed with double its volume of alcohol and brushed thoroughly and evenly over the film. The excess may

be blotted off and the tissue dried in fifteen minutes. It should be remembered that a bichromate sensitizer containing alcohol will not keep, hence the necessity of mixing the stock solution and the alcohol in small quantities as required for use. A more active stock solution for use as directed above, would be prepared as follows: Sodium bichromate, 10 grams; water, 100 c.c.

Sketches on Bromide Paper

Under this title H. Wild (*Photography*, July 22d) shows some delightful effects of artistic vignetting—not the usual thing, but a vignetting that eliminates the unnecessary portions of a picture as well as merging it into the background. The writer says:

"The first thing to decide upon is, how much of the picture is to be retained? and the best way to do this is to take a rough print (preferably bromide or platinotype) and work on it with a piece of white chalk till the effect desired is obtained. This is by far the most important part of the process, and any amount of time or trouble given to it will be well repaid. If, in carrying it out, we wish to remove some of the chalk, and it will not come off easily with a dry cloth, we can use one very slightly damp.

"Having made the preliminary study, the next thing is to make the print. As this, when finished, will be surrounded by a considerable expanse of white paper it should be kept much lighter and more delicate than if a solid picture were aimed at. It is also just as well to mask out nearly all the portion to be removed, but not to cut it too close. As the print will have to stand a fair amount of handling, it is better to harden it by passing it through a formalin bath before the washing is finished."

The reducer employed is made up of:

Saturated solution of iodine ..	1 part
Saturated solution of potassium cyanide	2 parts

"Into two saucers about three drops of iodine solution and six drops of cyanide are put. To one add about half a dram of water, and to the other about a dram to a dram and a half.

"The chalked print is pinned up where it can be seen, and laying the dry print to be treated on the glass, a brush is dipped in the stronger solution, and all that is not required roughly wiped out. It must not be taken out too closely, as at this stage a hard line will be left which must subsequently be softened; so enough should be left to work upon. All parts that are to be taken out cleanly, such as chimneys on a house, boughs of a tree, or any other parts that are to be cleared away altogether, should be done at this stage before the print is wetted.

"Having done this, the print should be rinsed well (for preference under the tap), at the same time lightly wiping the surface with a wad of wet cotton-wool. This should be left in one of the dishes of water just at hand, as it is wanted frequently, and sometimes in a great hurry. The wool is squeezed as dry as possible, and the surface moisture wiped off the print as it lies on the glass. We now proceed to soften, and break up the hard edges, and to shade off where required. I find the best way to do this is as follows:

"The wool, full of water, is put on one corner of the glass where it can be seized in a moment. A brush is dipped in the weaker solution, and wiped over the darker edges, and the solution so applied almost immediately wiped off with the wet wool. The wool is squeezed out, taking off surface moisture, and, if necessary, I go over it again and continue this until I get the effect wanted. For the lighter parts it is advisable to weaken the solution still more. The weaker the solution the easier it is to get delicate gradations.

"When we have nearly finished we shall probably find that some little dark bits, not noticeable before, will now look as if they should be reduced in strength, or removed altogether. The print is rinsed, the surface wiped, and blotted with clean blotting-paper. Then, with a small brush, or, for very small spots, a match sharpened to a point, we take up a very little of the stronger solution and carefully paint over the parts to be treated. Only one bit is attempted at a time, and the wet wool is kept ready to wipe off with, while the effect is still a little darker than is wanted finally.

A good washing completes the process, and it will be seen that the purely technical part is reasonably simple."

A New Method of Color Photography

Messrs. A. and L. Lumière have just published in the *British Journal of Photography* an epitome of a new method of obtaining photographs in natural colors that is among the most wonderful and, perhaps, promising of the many methods propounded. It is based on the fact that if white or colored light be passed through a layer of variously colored particles, each of these particles will absorb from this light its own particular color and pass on the rest of the rays, which latter will necessarily form the complementary. For example, white light striking a red particle would reflect red, but pass green light.

"If a collection of microscopic elements, of a transparent nature and colored respectively red, orange, green, and violet, be spread on the surface of a glass plate in the form of a single thin coating, it will be found, if the intensities of coloration of these elements and their number be correct, that the coating so made does not appear colored when examined by transmitted light, and also that this coating absorbs a fraction only of the light transmitted. The light rays in passing through the elementary screens, orange, green, and violet, reconstruct white light, if the number of surfaces or elementary screens for each color, and the depth of coloration of these are in accordance with the relative proportions of those found in white light. This thin trichromatic coating being formed is then coated with a sensitive panchromatic emulsion. If the plate so prepared is submitted to the action of a colored image, taking the precaution to expose through the back of the plate, the luminous rays pass through the elementary screens, and undergo, according to their color and the screens they encounter a variable absorption before having any influence on the sensitive coating. By this means a color selection should be effected which acts on the microscopic elements and which makes it possible to obtain, after developing and fixing, colored images in which the tones are complementary to those of the original."

From such a colored negative a correctly colored positive would be obtainable by direct printing on to a similarly prepared plate. The authors point out the numerous technical difficulties to be overcome in the application of these theoretical considerations, but state that they are not insurmountable and

that they are well on the way to their solution. The means they have adopted is stated as follows:

"We first separate in potato starch and by the aid of apparatus made for this purpose, the grains having a diameter of from the fifteenth to the twentieth thousandth part of a millimeter. These grains are divided into three parts and colored respectively red-orange, green, and violet, by the use of special coloring matters and by a process too prolonged to describe here. The colored powders so obtained are mixed, after complete dessication, in such proportion that the mixture shows no dominant tint. The resulting powder is spread by a brush on a sheet of glass covered with an adherent or sticky coating. With suitable precautions we obtain a single coating of grains all touching and without superposition. We then stop by the same process of powdering the spaces which may exist between the grains and which would allow the passage of white light. This stopping is accomplished by the use of a very fine black powder, as, for example, charcoal. We have by these methods formed a screen in which each square millimeter of surface represents two or three thousand small elementary screens of orange, green, and violet. The surface so prepared is isolated by a varnish possessing a sign of refraction as near as possible that of the starch. This varnish must also be as impermeable as possible, as it is coated with a thin layer of panchromatic gelatino-bromide emulsion. Exposure is made in the ordinary manner, in a photographic camera, taking the precaution always to turn the glass side of the plate to the lens in order that the light may pass through the color particles before reaching the sensitive emulsion. The necessity of employing emulsions of an extremely fine grain, and in consequence of lower speed, and the interposition of a coating formed of a system of microscopic screens, render the necessary exposure longer than for ordinary photography. Development is performed in the same manner as ordinarily, but, as we have said, if the negative be fixed with hyposulphite a negative is obtained which shows by transparency colors complementary to those of the object photographed. If it is desired to obtain correct colors we must, after development, but without fixing the image, proceed to reverse it by dissolving the reduced silver, and then by a second development

reduce the silver which has not been primarily acted on by the light. We see then that by simple manipulations little different from those used in ordinary photography, it is possible to obtain these special plates, prepared as indicated, the reproduction, by means of a single plate and a single exposure, of objects in their natural colors."

Lens Apertures and Shutter Speeds

Alfred Watkins recently read a paper on this subject before the Royal Photographic Society in which he demonstrated the advan-

tage that would accrue to the average worker if when altering the diaphragm opening the same movement were to change the shutter speed so as to correspond to the altered lighting of the plate. Mr. Watkins took out a patent for such an arrangement some four years ago, but so far he has not been able to make it commercially available. In the paper referred to Mr. Watkins gave drawings showing the application of the method to the Volute Shutter. Undoubtedly it will sooner or later be realized commercially to the great advantage of all workers.



A HAPPY FAMILY

BY E. W. HUMPHREYS

An Interesting Exhibit

Among the most handsome, as well as interesting exhibits at the Fair, is that of the G. Cramer Dry Plate Company, located in the Palace of Liberal Arts, Block Number Fifty-three, at the intersection of Aisle G and Aisle Four. This exhibit, which is *the only one of its kind* at the World's Fair, and consists of a large collection of the finest photographs and a number of exquisitely beautiful transparencies, all made by the foremost photographers and artists of this country on the famous Cramer Plate. This exhibit must be seen

to be appreciated, and we would therefore strongly urge any of our readers who attend the Fair to be sure and visit this very interesting display, feeling confident that what they see there will amply repay them for their visit.

The Cramer Company have advised us that they will be much pleased to have visiting photographers to the World's Fair call at their magnificent establishment at the corner of Lemp Avenue and Shenandoah Street, where a most cordial welcome awaits any visitor.

With the Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Future of Color Illustration

Charles Walsh, of New York, recently contributed the following to *The Inland Printer* which is worth thinking about: "German pedagogs have been preaching for some time the doctrine that illustrations in black and white are mere makeshifts, and that especially in educational books they should rarely, if ever, be used. What the German scholars think today, the world thinks tomorrow. They tell us, and rightly, that we see in colors, not in black and white, and therefore the child has to adapt his vision to a wrong plane in order to understand the latter. One has only to put black and white pictures and color pictures before the very little ones to see how quickly they turn to the colored ones and leave the other. We are but children of a larger growth and act precisely in the same way. With the improved mechanical methods, there is no doubt in my mind that the day of the black and white illustration is rapidly passing away, and that all our books and magazines will in the very near future be illustrated as they should be, in colors alone."

Velvet Velox for Half-Tones

The new velvet velox paper is proving most satisfactory to photo-engravers. Several workers have told me that they do as well with it as with solio. The paper seems to have just that quality in the shadows that has been lacking in all other development papers.

For Mounting Three-Color Half-Tones

Mr. Symmons of the Polytechnic, Regent Street, London, England, has devised a simple method for effective mounting to get the

blocks all to be of exactly the same size. You pull a proof on a piece of card if you like, and you prick the register marks, making pin holes. You cut an aperture where the picture was before, inside the aperture at each corner. The card is placed over all the plates in succession; the pins being dropped into the register holes to secure the due coincidence.

Medals Made by Process Photography

The old engraving process known as the "washout gelatine" is now being used for the purpose of making medals. The following extract from *Harper's Weekly* gives a fair idea of how it is done: "A photographic process whereby metal bas-reliefs such as medals are produced direct from the living subject has recently been developed, and threatens to rival the work of the die-sinker and sculptor. Samples thus made were shown at a scientific exhibition in London and aroused considerable interest, due to the faithfulness with which the original subject was reproduced. The process consists in first making an ordinary photographic negative of the head which is to figure on the medal, the only departure from ordinary practice being in the lighting of the subject, which is arranged in a somewhat peculiar way. There are ten planes of illumination produced by lamps of special construction, so placed and adjusted that there is a gradation of intensity of illumination which varies from intense brilliancy on the portion nearest to the camera—that is, the parts which would appear in the highest relief on the medal—to an almost absence of illumination at the background. After the negative has been made it is placed on a plate coated with bichromatized gelatine and exposed to the light.

That portion which is affected by the light passing through the transparent parts of the negative becomes insoluble, and when the plate is washed remains, while the part protected from the action of the light by the opaque parts of the negative is washed away, leaving a film of gelatine of varying thickness, corresponding to the negative. From this is made an ordinary plaster mold, with which metallic bas-reliefs can be produced by electro-deposition. Successful results have been obtained with bas-reliefs as large as two inches in diameter and one eighth of an inch high."

The Four-Hundred-Line Screen

Ogden Bolten, Jr., Sacramento, asks for definite information about the four-hundred-line screen for photogravure. *Answer:* The making of the photogravure plate on copper by the old process is a long and tedious task and requires a great deal of original ability, as the etching is almost as difficult as drawing. The result depends not as much on the perfection of the process as the skill of the workman. There is a great deal of difficult work in the handling of carbon films, dusting, powdering, burnishing, etc. A very small plate will require half a day's time and until the work is finished the result is in doubt. Of course the real beauty of the photogravure comes from the infinitesimal, irregular dots left by the dust deposit. It was to duplicate this dot as nearly as possible that Max Levy made the four-hundred-line screen. This screen is so fine that very few people can see the "mesh" without a magnifying glass.

With this screen the old tedious process of photogravure is done away with. To make the negative it is only necessary to put an ordinary photographic negative in such a position that it can be photographed by transmitted light through the screen. (With an up-to-date copying camera this is an easy matter.) The resulting screen negative is what would be called a "positive." The print on the copper is made in the usual way, but if glue enamel be used it must be cleaned off, which is somewhat difficult. To overcome this the print is made in bitumen whose only disadvantage is its slow printing qualities. The plate is then etched like an ordinary half-tone and printed on a plate press. The print is satisfactory in every particular but one—for highly artistic work, such as paintings, it is a little bit "mechanical."

Re-Etching Half-Tones

In these days when certain brilliant results are required in half-tones, the following bit of advice from *The Inland Printer* should prove valuable to every photo-engraver: "It is properly the engraver's business to re-etch the plates, for his training has taught him to note the differences between the proof and the copy, and what is required to make the reproduction right. There are two methods of re-etching half-tones. One is the way the artist-etcher proceeds, by stopping out with shellac or asphalt varnish the portions of the plate sufficiently etched. This method is called "staging." The other way is the one employed by the steel engraver, who brushes a mordant on the part of the plate he wishes to etch deeper, spreading this mordant over a wider and wider area as he proceeds, in order that lines do not show where the solution stopped. He uses blotting-paper to take up the mordant when it has used up its energy, or before brushing over some fresh mordant. Both of these methods can be employed on the same plate. In either case the half-tone should get what is called a "flat bite." That is, it should be etched evenly, without brushing locally. When the high-light dots are nearly fine enough, the plate should be taken out, dried, and a proof taken. Comparison of the proof with the original should determine whether the plate requires a second "flat bite," or if it is ready for re-etching. At intervals during the re-etching the engraver dries the half-tone and rubs into it powdered magnesia, which tells him the state of the plate."

Newspaper Illustrating

The following editorial from the *Progressive Printer* is most timely, and truthfully refers to a state of affairs that ought not to exist. But it does exist today as it did ten years ago. Newspaper illustration has only reached its present position by fighting, tooth and nail, with every other department of the paper. Artists and photo-engravers have made constant efforts to improve their work; printers, stereotypers and pressmen have done all in their power to render that work impractical or unsatisfactory. And in view of the fact that pictures have been the principal means of the expansion of the modern newspaper, and have actually doubled the working forces of all the objecting departments, one can only ask, Why?

"One should appreciate the fact that almost no improvement has been made in newspaper illustrations from a mechanical or artistic standpoint, and the half-tones in today's paper are no better than those of three years ago. It is with this feature of the subject that we want to deal, and while no revolution of the art is intended, a review of existing conditions, as they appear to the writer, may have the effect to cause those most interested to think.

"To begin with, no matter how well a half-tone is made, it requires skill of a high order on the part of the pressman to retain all its tone values, and unless he can 'get out of the plate all there is in it' the half-tone as printed will be but a partial representation of the engravers' work, and will consequently deteriorate in appearance. Thus it is shown that the co-operation of the pressman is needed to insure proper results from half-tone illustrations, but that alone will not suffice, as skill also enters largely into the matter. Right here is where a snag of huge proportions is struck. The mere fact that a pressman knows his machine, and has worked on it for a long time, does not necessarily constitute him a good printer of half-tone illustrations without study or efforts on his part. Yet it is an accepted fact in nearly all newspapers that the writer has ever noticed. In changing the motive power on elevated railroads from steam to electricity the operators or engineers were given a course of training to enable them to enter upon their new duties in the proper manner. Did any one ever hear of the pressman of a newspaper even worrying on the subject of printing half-tones when his employers decided to use them? In most cases he rebels at the thought, and he will do all in his power to discourage the idea. When, however, it is forced upon him, having plenty of confidence in his ability, he tackles the job in his customary style, without knowing anything about how half-tones are made and caring less. His just anger arises every time he is compelled to run a half-tone form, and his main object is to get it off his hands. Of course, there is little time to study or experiment on a newspaper, but there are lots of 'little things' about half-tones that, if the pressman knew them, would greatly assist him in his work and help him keep his temper at the same time. In this connection it will not be amiss to state that in the job field the skill of the engraver has

long been recognized and studied by the other craftsmen. Thus we see special papers, special presses, inks and other supplies made to show up at their best the work of the engraver, while on the newspaper the engraver is limited and restricted to making plates, that the craftsmen following him, in the making of a newspaper, can conveniently handle."

* * *

"The stereotyper stands in much the same light as the pressman. He has held from the first that half-tones are no good for newspapers, because they cannot be successfully stereotyped. He takes a fierce delight in demonstrating the correctness of his theory. He has not seen fit to change materials or methods in many instances, and even looks upon the introduction of machinery in his trade as a bad omen. The results he gets are far from satisfactory, and he is happy in his own mind that he is "onto" the game and cannot be fooled by the engraver. He will point with pride to a cut, saying: 'That cut is clean and sharp, and therefore deep; this one is just the reverse, and therefore shallow.' Yet they were etched side by side, on the same plate.

"It is hardly fair to expect good results under the conditions mentioned when every one handling half-tones, after the engraver, is interested in their elimination from the newspaper field, and is constantly looking for flaws, not for the purpose of remedying them but to further demonstrate their lack of value.

"At last comes the engraver. He, being regarded as the source of all the troubles to the men before described, is a sort of an Ishmaelite, and every one takes a fall out of him at the first opportunity. It's a case of 'hit him again, he has no friends.' No matter what he says, does not the word of the stereotyper and pressman, who have both been in the employ of the house for a long time, prove that his work is defective? Could anything be plainer? And there the matter rests. The business manager is up against it, and though he calls them all together for the purpose of improving the appearance of the paper, nothing but a rehearsal of fancied or real wrongs develops therefrom. Every one concerned goes back to his work with a grim determination to show up the other fellow."

Club Notes

News Items From the California Camera Club

By C. A. GOE

The Outing and Camera Club of San Jose

On Thursday evening, August 25th, several members of the California Camera Club journeyed to San Jose for the purpose of giving an exhibition before that club. The San Jose Club had secured a hall for the purpose and when the first picture was thrown on the screen there was not an empty seat in the house, and throughout the entire evening the audience listened most attentively to the description of the pictures as given by Frank C. Bangs. Mr. Bangs was very ably assisted in his work by Mr. Stevens, who operated the lantern. During the intermission Charles E. Hay, the very talented barytone, captured the audience with his vocal selections. There was not a hitch in the entire exhibition except that in describing a beautiful winter scene at Lake Tahoe, Mr. Bangs insisted on calling it a "show snene," and when a fruit-tree in blossom was called a "peach-tree" one of the San Jose boys saw a wonderful resemblance to "cherry blossoms" and it proved to be a fact that the peach-tree was indeed covered with the prettiest lot of cherry blossoms imaginable.

At the conclusion of the exhibition the San Jose boys took the delegation from San Francisco to a near-by café where a banquet had been prepared, thereby enabling the members of the two clubs to meet in a social way and become better acquainted. Mr. Hay was again called on and his songs brought forth merited applause not only from those at the club table but from other portions of the house. I am sorry I cannot give you the names of the San Jose Club members in attendance at the banquet but the San Francisco delegation was made up of Messrs. Bangs, Aylesworth, Stevens, Myers, Clute, Hay and Goe. It is expected that similar visits will be made to San Jose for the purpose of giving demonstrations,

lectures, and the like. The new San Jose Club expects soon to secure quarters on First Street, where they will install fully equipped dark rooms, printing rooms and a reading room. With the enthusiasm shown by their members, future growth and a large membership is assured.

California Camera Club Outing

On Admission Day (Friday), Saturday and Sunday the California Camera Club held an outing at Camp Vacation. The start was made from the city on Friday morning, arriving at this hotel under canvas in time for lunch, and for two days and a half a very delightful outing was held among the redwoods of the Russian River Valley. There is an abundance of pictures along the river and with the fishing, rowing and swimming the time was well occupied by all who attended. The club over-night outings are always enjoyable and are well attended.

Colorado International Photographic Exchange Camera Club

Twenty-two members of the Colorado International Photographic Exchange Camera Club held an outing on Sunday, August 21st, in the shape of a trip through Ute Pass, Colorado. The Denver Photographic Society was invited to accompany them and President Beam and several of the members of that club availed themselves of the opportunity. The start was made on a bright, clear morning, but before the party reached its destination the rain was falling in torrents and for the balance of the day it was necessary to stay under cover and seek amusement in some form other than picture taking. This was not difficult for each and every one pitched in and the day was made enjoyable even though a stormy one. On the following Sunday several of the members repeated the trip with better results and secured pictures in the canyon. This outing ended the club runs for the season.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

Paper for Kallitype

A correspondent in Iowa writes to ask what kind of paper is best suited for coating with the kallitype formula. The issue of *Photo-Miniature* devoted to the subject names several, and inquiry made of a local worker who has employed the process quite extensively elicits the fact that he uses mainly Byron & Weston's Super Royal, Four-Ply Wedding Bristol and Argyle Parchment. To be more explicit it might be well to add that almost any good paper strong enough to stand the soaking in the solutions will answer the purpose admirably. There does not seem to be the same required freedom from metallic particles that plain salted paper necessitates.

The Size of the Stop

Although the text-books tell us that the *f* value of any particular stop is in direct proportion to its relation to the focal length of the lens, the statement is not absolutely correct. No small amount of the correspondence reaching this department is concerning this point. The concentration of light by the front combination makes a doublet seem more rapid for the same sized stop than would a single lens. The measured aperture of the stop used in a doublet is not the virtual *f* value of that stop, unless the lens be a single combination focused on a distant object. With the stop placed between the combinations of a doublet the value of a stop is greater, and focused upon a near-by object the size of the stop decreases in value as the focal point is brought nearer to the instrument.

Another Source of Misinformation

I have believed all along that the ordinary photographic departments in the lay press were entitled to the palm. I stand corrected. One of my correspondents recently sent me page 44 of a catalogue issued by one of the large Chicago supply houses. I am glad he sent no more. The entire page is devoted to "Photographic Lenses," or rather what purports to be a treatise on the subject. The author is made to say: "F5.6 means twice as much speed as have the double anastigmats working with *f*7.7. In turn, lenses working at *f*7.7 are twice as fast as those working at *f*8. And still there is the same wonderful sharpness, the same detail and definition." If any of my readers can give more misinformation about lenses in as few words as that, I would be pleased to advise them of the name and address of the firm issuing this compendium. He might secure employment when they come to get out a new catalogue.

That Enlarging Camera

Another correspondent has written to ask concerning the enlarging camera described by Mr. Waldo in the April issue of this magazine. The gentleman claims that a much greater extension than that advised is required in order to secure an eight by ten enlargement from a "Brownie" negative. In this he is certainly wrong. His letter was referred to Mr. Waldo who says in reply: "In stating that an enlarging camera having an extension of ten feet is required for enlarging a Brownie Kodak picture (size $2\frac{1}{4} \times 2\frac{1}{4}$) to nearly 8×10 , your correspondent is much in error, as a moment's consideration

of the laws of optics governing lenses will show. The formula for determining the distances of negative and paper from the lens may be mathematically expressed thus: $\frac{1}{f} = \frac{1}{v} - \frac{1}{u}$; where u =distance of negative, v =distance of paper and f =focal length of lens. If now, we represent the linear magnification by n we have $\frac{v}{u} = -n$ (expressed negatively since the image is inverted). We may now derive a value for u in terms of n from the two equations, and the resulting formula for the distance from lens to negative will be $u = -(1+n)\frac{f}{n}$. In like manner we can find the distance from lens to paper from the expression $v = (1+n)f$. Where your correspondent makes his error is in failing to observe that n is for linear and not for areal magnification; that is to say, the ratio of v to u is not in the areal dimensions of the image and object but in the linear, for the areal dimensions are in the same proportion as the squares of the linear. Thus, to enlarge a Brownie negative to say nine by nine we do not figure n thus: $\frac{9 \times 9}{2 \frac{1}{2} \times 2 \frac{1}{2}} = \frac{81}{6.25} = 12.96$ sixteen times, but four times. Your correspondent wishes to enlarge a picture measuring $2\frac{1}{4} \times 2\frac{1}{4}$ to $5\frac{1}{2} \times 6\frac{1}{2}$ which cannot be done without distortion or trimming as the measurements of the enlargement must be proportional to those of the negative. A near approach to this size would be $5\frac{5}{8} \times 5\frac{5}{8}$, an enlargement of two and one-half times. Assuming that his lens has a focal length of ten inches and substituting in the third formula we have: $u = -(1+n)\frac{f}{n} = -(1+2.5)\frac{10}{2.5} = -3 \times \frac{10}{2.5} = -12$ inches, the distance of lens to negative. For distance from paper to lens, using the fourth formula we have: $v = (1+n)f = (1+2.5)10 = 35$ inches.

As for the lens itself, the quality must depend upon the work to be done. For enlargements of about two diameters (or less) I use a lens which I purchased at a supply house for \$1.75. The results, of course, are not as sharp as those obtainable with a high-grade lens, but I find the work sufficiently well defined for my purpose.

To enlarge a "Brownie," however, to 9×9 and get a sharp enlargement without a fuzzy appearance, would require a lens of very high grade, the cost of which might run above \$50, although purchased second-hand; excellent high-grade lenses can be obtained at a much lower figure.

As for the kind of lens required, where a single lens (not two lenses mounted in

combination) is employed, the double convex is used.

The apparatus for making such an enlargement as the one referred to above would have to admit of a five-foot extension, which is often beyond the range of a home-made instrument. If provided with a camera having sufficient draw of bellows, however, such enlargements are readily made by placing the camera on a board resting on a window sill (at right angles to it) of a darkened room. The window is covered so that the only light is that which enters through the lens (which points inward of course), this light being reflected by a mirror which is placed at such an angle on the board at the end which projects outside the window, that the rays will be thrown through the plate in the back of the camera, and its image cast upon an upright sheet of bromide paper placed at a proper distance from the lens within the darkened room.

I know of no method of making an enlarging camera using a single lens, in which the distance from paper to negative would be limited to two feet, and which would still be capable of making enlargements of any considerable degree of magnification.

Ray Filter for Painting

The purchase of a yellow ray filter entails only a small expense but the photo-engraver doesn't always feel justified in going to even that, because on a small job it might mean half the profits. Of course the filter will last until it gets broken, which may be in a year and it may be the next day. Here is a cheap way to make a filter. A 4×5 will cost about five cents. Take an ordinary dry-plate and put it into the hypo bath until it is clear. Wash it for about ten minutes and then put into a strong solution of bichromate of potash. Take it out a few times and hold it under the tap until it has soaked for about ten minutes. Then rinse it off and stand it up to dry. This will be the true yellow color for photographing oil-paintings to bring out their visual values. Now don't think you can make a set of three-color filters by this method because they have to be exactly the same thickness, which ordinary dry-plates are not.

Notes and Comment

The *British Journal Almanac* for 1905, is now in preparation, and this mammoth annual bids fair to become as bulky, if not more so, than in former years. The book will have something over 1,500 pages, incredible as it may seem. In spite of its great number of pages the price of the *British Journal Almanac* remains unchanged at 50 cents for paper, \$1.00 for cloth binding, postage 28 cents, at which price it may be ordered from any dealer. G. Gennert, the American distributing agent, 24 and 26 East Thirteenth Street, New York, assures us that the American supply is positively limited to 2,000 copies, and as this is only one copy to every six photographers in the United States, it follows that, as was the case last year, the book will be sold out, before the supply is received. Photographers are urged to order of their dealer at once to avoid disappointment.

The £1,000 Kodak Competition

A detailed report of the results of the £1,000 Kodak Competition has been received in this country and the results cannot but prove gratifying to those who take an interest in the advancement of American photography. There were something over 20,000 entries received of which about 12,000 were from the British Isles, 2,500 from France, 2,000 from the United States, 1,700 from Germany and 2,000 scattering. The British Isles received 229 prizes, the United States 85 prizes, France 28 and Germany 12. It will thus be seen that the British exhibitors received one prize to every 52 entries, the French, one to every 89, the German, one to every 141 and the American, one to every 23 entries. Our American amateurs, in proportion to their entries, carried off over twice as much as their British cousins, three and a half times as much as the French competitors and did six times as well as the German—at least such was the opinion of the British judges who were no less personages than Sir William Abney, Craig Aman and Frank Sutcliffe.

In their awards the Judges diverted some of the prizes in Class B of the Kodoid Com-

petition and in both classes of the Developing Machine Competition to the N. C. Film and Kodoid sections.

We are informed that Kodak Limited will make a display of the best work at the Kodak Galleries, 40 Strand, continuing same for several weeks.

The list of American prize-winners follows: N. C. Film Competition, Class "A"—Third prize, Miss Laura Adams Armer, 1311 Arch Street, Berkeley, California; seventh, Mrs. Helen W. Cooke, 381 Angell Street, Providence, Rhode Island; eighth, John S. Neary, Trenton, New Jersey; tenth, D. J. Cartwright, 30 Kilby Street, Boston, Massachusetts; twelfth, George Adamson, Walkerton, Ontario; fourteenth, Thomas A. Morgan, 207 Century Building, Denver, Colorado; twentieth, George F. Fisher, Tucson, Arizona; twenty-second, Albert H. Moberg, 945 Seminary Avenue, Chicago, Illinois; twenty-third, Miss Nellie Coutant, 705 South Water Street, Crawfordsville, Indiana; twenty-fourth, William C. Motteram, 1604 Wellington Street, Philadelphia, Pennsylvania; thirty-second, Miss H. B. Cole, 437 East State Street, Trenton, New Jersey; thirty-third, Robert G. Klotz, 42 East Twenty-second Street, New York City; thirty-seventh, Eldred M. Keays, Ann Arbor, Michigan; forty-first, Louis J. Christie, Quincy, Illinois; forty-second, Henry S. Whitney, 179 South California Avenue, Chicago, Illinois; forty-fifth, H. A. Rothrock, West Chester, Pennsylvania; fiftieth, H. B. Conyers, Urbana, Ohio; fifty-first, Dr. A. R. Benedict, Montclair, New Jersey; fifty-fourth, Ethyl Amelye Weisel, 5 East Fourth Street, Williamsport, Pennsylvania; fifty-fifth, Charles Ziegler, 1237 Wilcox Avenue, Chicago, Illinois.

N. C. Film Competition, Class "B"—First prize, John Dolman, 1328 Chestnut Street, Philadelphia, Pennsylvania; fourth, Walter Zimmerman, 10 South Eighteenth Street, Philadelphia, Pennsylvania; ninth, Mrs. Nancy Ford Cones, Covington, Kentucky; thirteenth, Edgar J. Parker, West Chester, Pennsylvania; twenty-second, H. Mortimer Lamb, Victoria, British Columbia; twenty-third, Thomas A. Morgan, 207 Century

Building, Denver, Colorado; twenty-fourth, George L. Beam, Passenger Department Denver and Rio Grande Railroad, Denver, Colorado; twenty-fifth, Laurence Osgood Macomber, 82 South Pasadena Avenue, Pasadena, California; twenty-sixth, Miss Florence Howland, Conway, Massachusetts; thirty-sixth, Charles M. Carter, 617 Kittredge Building, Denver, Colorado; forty-third, H. B. Conyers, Urbana, Ohio; fiftieth, Miss Grace E. Mounts, Morrow, Ohio; fifty-fifth, Mrs. Helen W. Cooke, 381 Angell Street, Providence, Rhode Island; fifty-ninth, John S. Neary, Trenton, New Jersey.

N. C. Film Competition, Class "C"—Second prize, A. S. Howard, 40 Wesleyan Avenue, Providence, Rhode Island; sixth, Laurence Ridges, 40 West North Temple Street, Salt Lake City, Utah; seventh, Miss Laura Adams Armer, 1311 Arch Street, Berkeley, California; ninth, Mrs. L. R. Graham, Pittsfield, Illinois; tenth, Miss Nellie Coutant, 705 South Water Street, Crawfordsville, Indiana; thirteenth, Thomas A. Morgan, 207 Century Building, Denver, Colorado; nineteenth, Gustave Moeller, 1610 Vliet Street, Milwaukee, Wisconsin; twenty-first, John Schuler, 130 Park Place, Akron, Ohio; twenty-second, H. B. Conyers, Urbana, Ohio; twenty-ninth, Charles H. Loeber, 15 East Seventeenth Street, New York, New York; thirty-second, Miss Elizabeth Hill, 108 Ocean Avenue, Woodsford, Maine.

N. C. Film Competition, Class "D"—Second prize, Miss Laura Adams Armer, 1311 Arch Street, Berkeley, California; eighth, William C. Notteram, 1504 Wellington Street, Philadelphia, Pennsylvania; thirteenth, Walter Zimmerman, 10 South Eighteenth Street, Philadelphia, Pennsylvania; fourteenth, Annie W. Brigman, 674 Thirty-second Street, Oakland, California; seventeenth, H. B. Conyers, Urbana, Ohio; twentieth, George L. Beam, Passenger Department Denver and Rio Grande Railroad, Denver, Colorado; twenty-first, Thomas A. Morgan, 207 Century Building, Denver, Colorado; twenty-seventh, Laurence O. Macomber, 82 South Pasadena Avenue, Pasadena, California; thirty-fifth, Mrs. Myra A. Wiggins, Salem, Oregon; thirty-sixth, Miss H. B. Cole, 437 East State Street, Trenton, New Jersey.

Kodoid Plate, Class "A"—Second prize, Miss Laura Adams Armer, 1311 Arch Street, Berkeley, California; eighth, Thomas A. Morgan, 207 Century Building, Denver, Colo-

rado; tenth, H. Mortimer Lamb, Victoria, British Columbia; fifteenth, Walter Zimmerman, 10 South Eighteenth Street, Philadelphia, Pennsylvania; sixteenth, S. R. Carter, 665 Huron Street, Toronto, Canada; twenty-eighth, Charles E. Wallace, 307 East Court Street, Urbana, Ohio; thirty-second, Harry C. Rubincam, 207 Century Building, Denver, Colorado; forty-fourth, Charles S. Price, 315 Sherman Avenue, Denver, Colorado; forty-ninth, Dr. A. R. Benedict, Montclair, New Jersey; fifty-sixth, Harold A. Ray, 360 West Fifty-eighth Street, New York City; seventy-third, Will E. Gladwish, 537 Cadieux Street, Montreal, Canada; seventy-fourth, Sumner W. Matteson, St. Paul, Minnesota; seventy-fifth, Mrs. L. R. Graham, Pittsfield, Illinois.

Kodoid Plate, Class "B"—Second prize, D. J. Cartwright, 30 Kilby Street, Boston, Massachusetts; twenty-first, Louis R. Murrya, Ogdensburg, New York.

Developing Machine, Class "A"—Second prize, Miss Nellie Coutant, 705 South Water Street, Crawfordsville, Indiana.

Developing Machine, Class "B"—Second prize, Miss Nellie Coutant, 705 Water Street, Crawfordsville, Indiana; eighth, Harry R. Cate, 36 Hamilton Avenue, Haverhill, Massachusetts; eleventh, Mrs. L. R. Graham, Pittsfield, Illinois.

Special prizes—T. G. Cochrane, 6 Washington Street, Morristown, New Jersey; Miss Louise V. Hitchcock, 661 Palisade Avenue, Yonkers, New York; J. Brunner, Pine Grove Postoffice, Fergus, Montana; Henry Troth, 4037 Locust Street, Philadelphia, Pennsylvania; William C. Motteram, 1604 Wellington Street, Philadelphia, Pennsylvania; Laurence G. Reid, Greenwich, New York; H. C. Rubincam, 207 Century Building, Denver, Colorado; Miss H. B. Cole, 437 East State Street, Trenton, New Jersey; G. F. Fisher, Tucson, Arizona.

"The first Cooper-Hewitt Mercury Vapor Lamp to be utilized commercially on the Pacific Coast was installed a month ago by Messrs. Hirsch & Kaiser in their printing rooms. This lamp, owing to the peculiar quality of the light, yields a fully timed Velox Print in one half a second and a Solio or Aristo Print in four minutes. It has attracted great attention among local photographers and scientific men."

After months of work, with the sole idea of formulating a genuinely practicable plan of teaching thoroughly and successfully his system of "One-Man-Method" Photography as practiced by him first in little towns, then larger ones, and finally on Fifth Avenue, New York City, during the past nine years, Milton Waide, of 164 Fifth Avenue, New York, presents to those interested in photography, beginner, amateur or professional, a perfected plan of instruction including his entire method and business system, taught from afar at a very low tuition price. His plan of instruction includes five "proceedings" explained fully in a prospectus mailed to any one upon request, which in itself contains valuable suggestions and half-tone illustrations of his novel print and mount effects, made under *his* light and by his pupils with *home window* illumination.

The teaching puts into the pupils hands *ideal negatives* for Platinum and Carbon effects on Artificial Light Developing Papers, prints therefrom in original mounting and Folder effects, material to make trials with, in fact, it consists in a carefully devised plan of exchange, criticism and suggestion, conducted by use of the mail and express as carriers back and forth, including business hints, devices used, general helps and aids, answering of questions, use of his copy-righted booklet for customers, etc.; his interest in the pupil's success not ceasing until he is satisfied that the "Method" is *thoroughly mastered*.

That Mr. Waide is sincere in his statement that he cares more for elevating photography by helping students to better work, than for profit, seems proven by the fact that the low price he asks for all that he promises in his Prospectus, can but barely pay the cost to him. Send for the Prospectus, it tells it *all*, and if sent for at once, the holiday season may find you trying the value such a method offers.

Are you ready for the World's Fair Convention? The time is drawing near for the Convention of the Photographers' Association of America, and if you have not made ready, you should do so at once, for this Convention will be a good one, a pleasant one, and will be a loss to you if you miss it.

Some of the points of interest are:

A select exhibition of pictures from all quarters of the country.

A review of the pictures in the Fine Arts Gallery of the World's Fair by Professor Griffith.

Demonstrations of the new Cooper-Hewitt mercury light, and pictures made by the same at the convention hall.

Demonstrations in flash-light photography. Exhibitions and demonstrations of photographic printing machines.

Practical demonstrations in home portraiture.

Photography from 1846 to the present time by the oldest photographer in the United States, who is eighty-two years old, yet young as the rest of us. You will enjoy this.

Exhibition of color photography; something new.

Manufacturers' and dealers' day in which to examine all that is new in photographic apparatus.

Presentation of life memberships to the Past-Presidents, and a ten-minute practical talk from each.

A program full of good practical things. Half-day sessions only, which will be held on schedule time.

Very low rates on all railroads,—the World's Fair rates.

Great effort is being made by the Executive Committee to make this Convention a successful one in every particular, and every photographer is urged to lend all assistance possible by getting up his best display.

The Convention will be held in the buildings of the Forest Park University, which have been converted into a hotel for the Fair period, and is near the southeast entrance to the Fair grounds, and on the car-lines that run west from the Union Station. (Take the Laclede or Market Street cars for the hotel.)

It is important that you secure quarters before coming to St. Louis, as you will save time and trouble. To secure accommodations at the Forest Park University Hotel you must have your dues paid and a receipt from the treasurer, as the hotel has been reserved for the members and their families only.

To avoid delays and mistakes in shipping, send to the Secretary, George G. Holloway, Terre Haute, Indiana, for shipping labels.

Pack your pictures securely and have return address on the cover.

Pictures for the Art Exhibit should be shipped to Chas. W. Hearn, Forest Park University Hotel, St. Louis, Missouri, in care of Fowler's Transfer.

All goods for the manufacturers' and dealers' display should be shipped in care of the Secretary, George G. Holloway, directed as above, and in all cases transportation charges must be paid.

Goods sent in care of Fowler's Transfer will be taken direct to the Hotel, otherwise they may be held in the city office, several miles from the convention hall.

Pay your dues to the Treasurer, Frank R. Barrows, 1873 Dorchester Avenue, Boston, Massachusetts, and get your receipt and order for hotel accommodations beforehand.

Remember the date, October 3d to 8th, inclusive.

CAMERA CRAFTY



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San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY
114 GEARY STREET SAN FRANCISCO, CAL.



Ellis A. Morgan

Shower
Weather

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX.

SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1904

No. 6

Some Odd Things in Night-Photography

By BENJAMIN W. DOUGLASS



ALONE

WHILE I have never found any phase of photography that was uninteresting, lack of time has prevented as thorough a following up of some lines as I would wish, no branch of our art-science has appealed to me more strongly than that classed as "night-photography," and for several years I have given it special attention. By night-photography I mean anything produced by artificial light. Many of our readers become disgusted with so-called flashlight work turned out by their amateur friends and never try anything for themselves. I remember the first flashlight I ever tried to take and if I had allowed my future work to have been governed by that experience, I do not suppose I should be writing this article. To make my story short: I had just purchased my first camera and was "up to my neck" in experiments and—I used *gun-powder*. Since then we have had the development of flash-powders that are safe, more brilliant, and practically smokeless, and with their aid I have taken groups,

portraits and the like with decided success. So much of this kind of work has recently been published in the photographic journals that it would be an imposition to present more.

The three flashlights that accompany this article are pictures of camp-fire and hunting scenes. The two groups were taken while on a canoe trip on White River during the summer of 1903. The other entitled "Alone," is trimmed from a large plate exposed while on a coon-hunt and was made during the past winter. For the benefit of those who have never learned how to trim pictures, let me say that the rest of the plate is a decided failure. The methods employed in these two pictures are identical. In each case the flash-powder was wrapped in paper and cast into the fire by some one sitting near it. Twenty grains of Luxo is usually enough although I prefer to use, for this purpose, one of the cheap, smoky powders that



RETURN FROM THE HUNT

THE CAMP-FIRE

are so objectionable in the house. With these cheap powders it is often necessary to use three or four times this amount but the excess of smoke gives quite a realistic effect.

On this page I present another night-picture although no pictorial claims can be made for it. My friends have been at a loss to explain the phenomenon but it is quite a simple affair. Here is the story.

I pointed a camera out of one of my back windows one evening and left a plate exposed while the moon proceeded to "get busy." A few minutes after opening the shutter the camera was accidentally moved slightly with the resulting jog in the path of light. The exposure, as I remember it, was about an hour and a half—some of our astronomical friends might be able to tell us exactly.

Did you ever start out after just a certain kind of picture and get exactly what you wanted? I do not believe I ever did although I have sometimes come so close as to make me doubt if the result was not a little better than my anticipation. One of my happiest accidents of this kind occurred last winter. As I was going home on a foggy night about ten o'clock, I looked down the street, said to myself, "There's a picture," and determined to get out my camera and go back

after it. On reaching home I found that one of my tripods had been left at the school and in my absence the other was loaned to a friend. The only thing I had to support my big 5x7 Montauk, was a little, old, rickety, discarded spruce affair that had long since been consigned to the attic, but somehow it managed to stand up during the five minutes' exposure that I gave and I am sure that I came as near getting what I went after on this occasion as I ever did in my life.



WHAT THE MOON DID

In this connection I would like to present another picture made by a friend of mine in Allegheny, Pennsylvania, showing the eruption of Mt. Vesuvius as presented in Paine's "Fall of Pompeii." Mr. Steele studied the scene for



A FOGGY NIGHT
by BENJAMIN W. DOUGLASS

several evenings. First, to determine when the people were in one position longest and, second, just when the most effective display of fireworks took place. This determined, an exposure was made from the roof of the grand stand, using a Seed non-halation plate which I also took the precaution to back as several 1,000 candle-power arc-lights came within the view. An exposure of thirty seconds with a Plastigmat lens wide open was given the people and then, waiting for the eruption, another exposure of five seconds. It was developed with rodinal, weak at the start but gradually strengthened until twice normal strength.



ERUPTION OF MT. VESUVIUS

BY WM. A. STEELE

Between the Plate-Holder and the Washing Rack

By PRESTON E. ANDERSON

I have, in my title, mentioned the plate-holder but it will be understood that the roll-holder or film pack container is also included. Again, where I use the word plate as I shall employ it throughout this article, it will be implied that the various forms of roll and cut films are also considered. While my subject will naturally confine me to a purely chemical aspect of photography I shall avoid any display of familiarity with complicated chemical reactions, hoping that by so doing I may be assured a wider hearing.

It being necessary that we should possess some knowledge concerning our plate, its composition and its quality, in order to understand the process of producing from it a negative; we will give it our first consideration. Briefly, it is merely a support, coated on one side with an emulsion of gelatine containing particles of silver bromide and silver iodide in a fine state of division. The exact proportions vary with different makes of plates, some claiming to contain the bromide salt alone. A discussion on the relative value of different proportional amounts has no place here except that it might be well to mention that the common idea that a certain plate is "rich in silver" as compared to another has no foundation on fact. A careful chemical analysis might of course show a difference in the amount of silver present in a given amount of two makes of emulsion, but the quality of giving an image of great strength depends entirely upon the molecular condition that has been secured by the particular method of manufacturing the emulsion. In addition to the gelatine, which in itself possesses some sensitizing properties in connection with the silver salts in excess of those found in collodion and albumen, the emulsion contains a preservative of such character and in such quantity as is believed to be best suited to the particular emulsion to which it is added.

The exact change which takes place when this emulsion is allowed to be acted upon by light in making the exposure through the lens, has never been definitely determined. For our purpose it is amply sufficient to consider this change as simply the creation of a condition which will permit of a continuation of the light action by the application of the developer, resulting in the changing of such particles as have received this action into molecules of metallic silver and by so doing forming the image as seen in our finished negative.

Before leaving the subject of the plate and the emulsion which it carries it will be wise, no doubt, to call attention to a certain property of this emulsion which is in too many cases not sufficiently taken into consideration. I refer to the reversal of the image as it is called. If a plate be given an exposure in excess of that required to give full density on development, so-called reversal takes place. In this case the resultant image at that point receiving an excess of light, does not attain greater density; neither does it come to full density any more rapidly. On the other hand, the obtainable density is less, lessening as the amount of excessive exposure is increased and ending in total reversal of the image or in other words, no developable deposit whatever. Continuing, a still further increase of exposure



CHRISTMAS CAROLS

BY LOUIS FLECKENSTEIN

us to equalize the great difference in the illumination of our ordinary subjects. In a landscape, for instance, the amount of light reflected by the sky may exceed by many thousand times that reflected by some dark portion of the view. Were the density secured in the negative in exact proportion to the amount of such light action the range would be much greater than it would be possible to register on any form of printing paper; in fact, the range of intensities so secured would be even greater than would be the apparent range of values as perceived by the eye. It is this reversal property of the emulsion which gives us a tinted sky in our negatives of fully timed landscapes when a less prolonged exposure results in one of such density that but white paper is shown in the print.

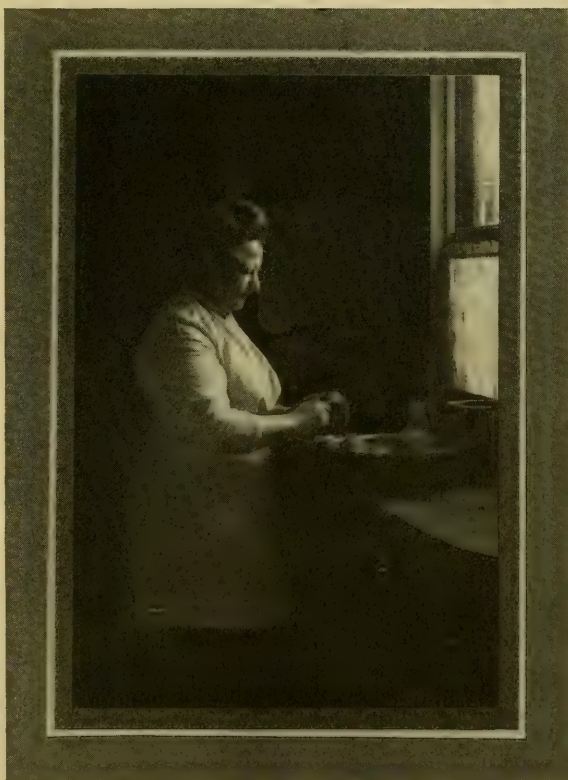
Leaving our exposed plate, the developer, ready to be applied to it, consists of a reducer, an accelerator and a preservative. The office of the reducer is to continue the action already begun in the acted upon particles of silver and reduce them to the black or metallic state. The accelerator assists or hastens such reduction both by its affinity for oxygen and again by its action upon the gelatine of the emulsion. The preservative is used either by reason of its affinity for oxygen being such that it protects the reducer as in the case of sodium sulphite or by reason of its power to lessen the affinity of the reducer for oxygen as does several of the acids. Returning to the first of the three components, the reducer, another popular misconception should be corrected. I refer to the belief that this or the other reducer possesses some particular advantage over its fellows. Experiments

results in the re-reversal of the image, density again increasing as at the initial point.

One would be inclined to ask why we could not secure complete reversal by prolonged exposure, producing a positive in place of a negative. This can be done with some subjects and under certain conditions with a fair amount of success, as, for instance, in the making of a negative from a negative by contact. In the case of an average subject in nature photographed direct, the simple fact that the range of light intensities is so great that while the high lights were perhaps reversing and again reversing, the less luminous parts would not have reflected enough light to cause any degree of reversal. This matter aside, it will suffice to note that this property of reversal allows

carried out in a very careful and painstaking manner by Alfred Watkins of England as well as by noted photographic chemists in Germany have demonstrated fully the utter fallacy of this belief. The first named gentleman reported the results of his experiments in this direction, results identical with those secured by his German coworkers, and summed up his deductions as follows: Effect on speed of plate, very slight and of doubtful difference; searching out of detail, no difference; ultimate density power, no difference; appearance of image, wide difference; speed of working, wide difference. Pyro, metol, hydroquinone, and a number of other reducers were included in the trial. His results proved that there was one action in which the various reducers differed. Some, such as metol, weak pyro and rodinal, give a fairly simultaneous appearance of the different tones, adding density slowly. Such developers are credited with being soft working for the reason that a negative removed and fixed at a point short of full density in the high lights is inclined to flatness in its tones. Hydroquinone and strong pyro, on the other hand, are characterized by a slower appearance, relatively, of the lower tones; during which time the high lights have gone forward to a good degree of density. It is evident that a negative removed from the action of such a reducer at an early stage of development will be more contrasty than in the former case and here is where these latter reducers secure the reputation of working contrasty or hard.

This brings us face to face with the undeniable fact that it does not matter what reducing agent is employed so long as the right length of time is allowed for its action. It is on this that Mr. Watkins bases his theory of time development which has so successfully stood the test of actual practice. He points out however that for convenience in securing negatives whose varying tones follow each other in a desirable ratio when it is desired to secure varying degrees of density in the highest lights, it is well to use a reducing agent with a quality about midway between those of the two groups mentioned. Such a choice made, the appearance of the image as well as density follow each other in a ratio proportional to the intensity of the various tones. Weak pyro, as explained, is in the first group while a stronger solution ranges itself in the second. A normal solution consequently should prove all that could be



"PEELIN' TATERS"

BY J. WILL PALMER

desired and when we couple with this the power which we have of placing it in either the first or second group by regulating the strength of the solution, the popularity of pyro is explained as well as the control which its admirers claim it gives.

Coming to the accelerators and ignoring in this brief paper acetonesulphite as falling outside of the regularly accepted hydrates and carbonates, I will simply describe the two latter. The two carbonates generally employed are those of soda and potash. There is little choice between them and if any, the carbonate of soda should be given the preference. It is a much more stable salt and more easily obtained of a pure and uniform quality. Of the hydrates, caustic soda, caustic potash and liquid ammonia are the forms in which they are known and used by the photographer. Besides being more energetic, little can be said in their favor over the car-softening effect and unpleasant acc-render them objectionable to be rarely sodium carbonate able it will suffice increase of the need not bring it times the weight in any given quantity. Nothing increasing it

Of the preservative is the most used. Much that is current in regard Neutral sodium ed, tests alkaline The word as used to the reaction of chemical solution.

in which it was advised to make such solutions neutral by the addition of an acid, while other writers have stated that such a solution testing alkaline, was proof that the salt was of poor quality. Neither of these statements are well founded. One should always secure this salt of a reputable dealer, and if bought in the form of crystals, see that they are kept in a cool, dry place, well protected from the air in sealed cans or bottles. Of the acids used, there is little choice. Oxalic acid has perhaps the least objectionable features. Citric acid is inclined to combine with the carbonate in the same solution and form a strong restrainer in the shape of a citrate. Oxalic acid on the other hand, if used in a solution made with water that is hard, combines with the lime to form oxalate of lime which is an insoluble white powder, often quite objectionable as an addition to the surface of our negatives. When soft or distilled water is used, this action does not take place. It should be mentioned that on mixing the pyro or other reducing solution containing the acid as a preservative with the accelerator solution of

bonates. Their upon the emulsion tion upon the skin tionable and cause used. Taking our as the most desirable to mention that an amount employed in excess of six of reducing agent tity of the development can be gained by further.

vatives, sodium commonly employ-misleading passes to this chemical. sulphite, so called with litmus paper. does not refer the salt but to its

I have read articles



WINTER IN THE WOODS

BY J. WILL PALMER

a two-solution developer, the acid at once loses its power as a preservative and for that reason the carbonate solution should contain the requisite amount of the sulphite. Another point worthy of mention is the fact that the amount of sulphite should be regulated by the bulk of the developer and not by the amount of any other chemical entering into its composition. In diluting a developer, a proportionate amount of sulphite should be introduced if it is desired to maintain otherwise normal conditions as to color of negative and the like.

As to the fixing bath, little need be said. Hypo is cheap. This sums up the whole matter. A fresh hypo bath has in itself a slight clearing and hardening effect that is all that is required, unless over-staining by the pyro developer be feared. The addition of an amount of acid sodium sulphite, sodium sulphite lye, or sodium bisulphite will permit of the bath being kept clear and usable for a long period as well as assuring a further clearing action equal to one fourth be added. Combination of sulphuric acid to be avoided. In continued use of a fixer, gradually increase and compose the film fixation. Another point to attract your attention to this: The first action of the bath is to change the salts to a transparent chemical passing into a soluble form. If a plate is moved from the bath before this action has taken place, the parts last to be washed will still contain the compound, ready to cause a stain at some future time. Such stains often are wrongly blamed to insufficient washing. Their prevention is simply a matter of allowing complete action of the fixing bath.

Trusting that I have given you some insight into the factors entering into the treatment of plates between the holder and the hypo tray which will assist you in securing better results, I can assure you that it is only by an understanding of these matters that you will be able to apply intelligently the power which is given by a judicious selection of your ways and means to the end—the print.



PORTRAIT STUDY

BY LOUIS FLECKENSTEIN

“Fine art,” Ruskin tells us, “is that in which the hand, the head and the heart of man go together.” Are we not all neglecting too persistently this last requisite, deceiving ourselves that the first two are all that the production of a photograph demands?

Timing Exposures With Ordinary or Artificial Light

By FRANK MORRIS STEADMAN

Cut a hole about a quarter of an inch square in the thin, flexible cover of an ordinary pocket note-book and expose a strip of Solio paper through it to any artificial light at a distance of four inches. The number of seconds necessary to obtain a just plainly observable tint when looked at in contrast with the original color of the paper is the time value of that flame or light. This time value is simply the actinic intensity that it creates at that standard distance as measured with Solio paper.

If a subject of ordinary color be photographed at that distance from the light this time value is the correct exposure with U. S. 16 diaphragm. This is called the subject diaphragm for that kind of a subject. The subject diaphragm for a very light subject would be U. S. 32 and for a very dark one U. S. 8. If the subject be at some other distance from the light, divide that distance by the standard distance and multiply the standard time value of that light (at the standard distance) by the square of the quotient. The result will be the exposure at that distance. If it be desired to use some other than the subject diaphragm, multiply the exposure as already obtained by the desired diaphragm U. S. number, and divide the product by the subject diaphragm. The result will be the exposure with the desired diaphragm.

If, as is generally the case in such work, the lens rests at a position farther away from the plate than its focal length, find its approximate position in the left-hand column below and multiply the exposure as already obtained, by the "position factor" of that distance. The result will be the correct exposure to give in photographing that subject:

DISTANCE OF LENS FROM PLATE	POSITION FACTOR
1 $\frac{1}{10}$ its focal length.....	1.25
1 $\frac{2}{10}$ its focal length.....	1.5
1 $\frac{3}{10}$ its focal length.....	1.75
1 $\frac{4}{10}$ its focal length.....	2.
1 $\frac{11}{20}$ its focal length.....	2.5
1 $\frac{14}{10}$ its focal length.....	3.
1 $\frac{17}{20}$ its focal length.....	3.5
Double its focal length.....	4.

In using fixed focus cameras as described in my article in the January CAMERA CRAFT this matter of position does not apply, as the lens is fixed at its focal length in such instruments. Their largest diaphragm may be called number 16, the medium 32, and the smallest 128, and although this is far from the truth, still no serious error will occur by reason of the great latitude of the emulsion of our plates.

Example: A white rose is to be photographed 8 inches from a Block light (gas) so as to reproduce it in its exact size. What will the exposure be with diaphragm 8? The subject diaphragm of a white subject as explained above, is

BY THOMAS A. MORGAN



AFTER THE DIP

32 and on measuring the intensity of the light at four inches distant its time value is found to be 32 seconds. We first find the time value of the light at eight inches: Eight divided by four equals two, the square of two is four and four times 32 seconds is 128 seconds, the time value of the light at eight inches and the exposure with the subject diaphragm 32. Second: find the exposure with diaphragm 8. It is well to think this process in proportion, as follows: The subject diaphragm is to any other chosen diaphragm as the exposure with the former is to the exposure with the latter. Or desiring to make the exposure with diaphragm 8, it would be as follows, $32 : 8 :: 128 : x$. Canceling 8 from the first and second terms we have $4 : 1 :: 128 : x$, and $1 \times 128 = 128$. $128 \div 4 = 32$, the fourth term and the exposure with diaphragm 8.

Third: find the increase necessary in the exposure by reason of the position of the lens. Supposing no auxiliary lens to be used in front of the regular lens, it rests, in taking a subject exact size, twice its focal length from the emulsion, and by the table it is seen that the position factor is 4. Therefore, 32, the exposure as previously found, multiplied by 4 equals 128, the final correct exposure under the conditions of the problem.

Suppose that a red rose was to be photographed at two inches from a common gas-jet flame. What would the exposure be with diaphragm 64? The rose to be copied about one-fourth size. The subject diaphragm of that subject is 8 and the time value of such a flame at the standard distance of four inches is 128 seconds. The distance from light to subject, two inches, divided by the standard distance, four inches, equals one half. The square of one half is one fourth and 128 seconds multiplied by one fourth equals 32 seconds, the exposure at two inches, with the subject diaphragm. What will it be with diaphragm 64? $8 : 64 :: 32 : x$. And the fourth term is found to be 256 seconds, the exposure with diaphragm 64. To copy a subject one fourth size the lens rests approximately at one and two tenths its focal length from the plate and the position factor is found in the table to be 1.5. Therefore $256 \times 1.5 = 384$, the exposure in seconds under the conditions of the problem.

Suppose that by a set of four Block lights, a desk and wall are to be photographed with the middle diaphragm of a fixed focus camera and from a distance of ten feet from the lights. What is the exposure? Since the time value of one such burner at the standard distance is 32 seconds the time value of four would be one fourth of 32 seconds which is 8 seconds. Ten feet divided by four inches equals 30, the square of 30 is 900 and 900 times eight seconds is 7,200 seconds, the exposure with the subject diaphragm 32, supposing the desk to have white articles upon it. As this happens to be the diaphragm to be used the calculation for diaphragm need not be made, and as the lens position is always the same in a fixed focus camera, no calculation is necessary and the exposure is as found: 7,200 seconds; 120 minutes or 2 hours, under the conditions of the problem.

The following statement of the facts of light, diaphragm, lens position and exposure covered the whole ground after the time value of the light *at the position of the subject* is ascertained:

$$\frac{\text{Time Value} \times \text{Diaphragm used}}{\text{Subject Diaphragm}} \times \text{Position Factor of lens} = \text{Exposure}$$

This refers in no way to artificial lights particularly but to all photographic conditions. If, by reason of the subject being at some distance from the source

of light, the time value is very extended, then the value may be taken closer to the light and the value at the subject calculated as already explained. The following statement gives the method:

$$\left(\frac{\text{Distance, light to subject}}{\text{Distance, light to measure}} \right)^2 \times \text{Time Value as measured} = \text{Time Value at subject}$$

This method of finding the time value at the subject may be employed in ascertaining the time value of room interiors as well as in photographing with artificial lights.

The reader will notice that in order to make the simplest kind of mathematical problem out of the conditions according to this system of working, two things must be known at the start, i. e., the time value at the subject and the subject diaphragm.

The time value of an intensity is its actinic point value or its intrinsic intensity and only by ex-
ures is it possible
simple care of
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TWILIGHT SHADOWS

BY WILL H. FOUTS

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placed upon those
interest it is that
films be correctly
—commercial in-
this table of sub-
proper diaphragms
the printed matter

that is packed in each box of plates or films that is turned out from the factories. It is a thousand times more important than the developing formula, but of course can only be utilized by those who will measure the time value of the light with a standard paper. (Solio is a convenient standard simply because of the circumstance that it is very extensively sold and circulated in all parts of the globe, making it a possible standard the world over.) If the photographic societies would persistently petition the manufacturers of plates and films to furnish this table with their goods, correct for each particular brand or speed, and the user would employ this method of measuring the light with Solio paper, the question of exposure as a complication would be at an end. It would be well to begin the consideration of the matter at all photographic conventions and meetings.

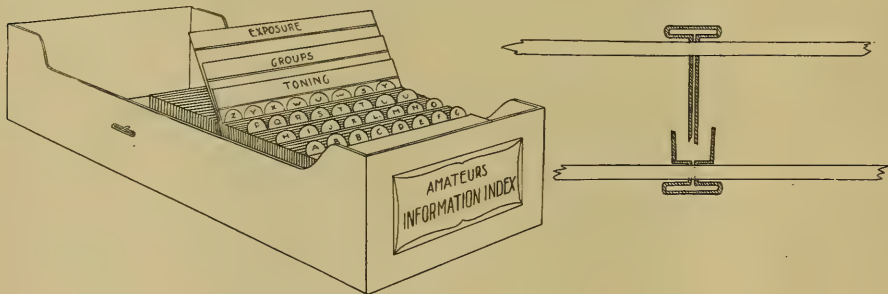
The Amateur's Information Index

By BERNARD C. ROLOFF

Do not confuse this index with those previously described in the various magazines for negatives, etc., as it is something entirely different, and as I have not as yet seen a description of an index for the purpose indicated by the title, I will endeavor to make this system clear knowing that it will just "fill the bill" for a large number of workers, as it did for me.

In the first place, a complete card index, consisting of a substantial pasteboard or strawboard box with a cover (the box having a capacity of from 1,000 to 2,000 light-weight cards), a 40 division index and 500 horizontal ruled cards may be bought from any office supply store for about \$1.25. This outfit is as good as any one could wish for, but for about 25 cents more it is possible to secure a better index with perhaps 75 or 100 subdivisions. If desired, a wooden box costing from 50 to 80 cents may be substituted for the one made of strawboard, or the box may be made at home, at the option of the user.

Very probably the worker will be content to commence with 500 cards instead of filling up the box with blank cards immediately. In order to keep these cards



from falling I insert a long shank, flat head paper-fastener in each side of the box just back of the cards, as may be seen in the illustration accompanying this article, and by bending over a portion of the long shanks to hold the fastener in place, and again bending the rest of the shanks to project into the box as shown in the sketch, the cards may be held upright in the box without trouble. If money is no object a wooden box may be purchased provided with what is known as a "follower-block" which will do the same thing, i. e., keep the cards upright, no matter how few cards are in the box.

The cards I use are quite thin but very tough and durable and are known as 110 pound weight. I get them thin because it enables me to save space and at the same time as I use a typewriter, I can run them off on that at a very rapid rate. If I were a good penman, however, I might prefer that way of writing them; either way will do. I do not determine what headings the cards are to have before writing them. Taking up the first volume of photographic magazines that is handy I go over the general volume index and pick out the articles as they come, determining the head they are to come under at a glance. For instance, I take a CAMERA CRAFT of October, 1902, and find a volume index at the back of same.

Taking one of the titles, "A Combination Developer," by Kemp, we find it is on page 146 of this volume (Vol. V) and so enter it on a card under the general head "Developer" adding the name of the magazine, CAMERA CRAFT, at the end. On this card is also put the information, "See also under Edinol, Hydrochinone, Metol, Amidol, Eikonogen, Glycin, Ortol and Rodinal," and such others as we happen to think of now or later. Then again looking at the volume index we find "Edinol for Bromides," by Hauberrisser, page 239, Vol. V, CAMERA CRAFT. This should be entered under the general head "Edinol" and also under "Bromide." Continuing, if we have an article entitled "Trimming, Mounting and Framing" it should be entered on three cards under each of these heads and each one of the cards should refer to all the others, as they are all closely related. Thus on the card find, "See also un-Mounting" and on card "Mounting" we are referred to "Trimming and Framing." It is often necessary to use several cards for one head, for four or five cards the general head being a large number that head, but importance as to go over the volumes is well but as I want my index to be very thorough, I use through each magazine find valuable items as "The Amateur's Troubles" and in Power's department and in fact in similar departments in other photographic magazines. For instance, some magazines publish queries and answers and it is quite often that I find thereunder the solution of some perplexing problem that has been troubling me for some time. All these things may be noted, or when quite short some of them might even be copied bodily onto the cards headed "Figures, Facts and Formulæ" as hereafter described.



AUTUMN

BY A. J. SWANSON

der Trimming and card "Mounting" "Trimming and often necessary to for one head, for four or five cards the general head being a large number that head, but importance as to go over the volumes is well but as I want my index to be very thorough, I use through each magazine find valuable items as "The Amateur's Troubles" and in Power's department and in fact in similar departments in other photographic magazines. For instance, some magazines publish queries and answers and it is quite often that I find thereunder the solution of some perplexing problem that has been troubling me for some time. All these things may be noted, or when quite short some of them might even be copied bodily onto the cards headed "Figures, Facts and Formulæ" as hereafter described.

Inasmuch as no amateur possesses all the photographic literature published, yet some have access to literature besides that which they own themselves, it might be as well to add to the card index such articles as might be of interest sooner or later in books that are thus accessible. I have the use of a large number of photographic books in the local public library, as no doubt many others have, and consequently enter on my index quite a number of articles which may interest me sooner or later and which may be found in these books. Thus: under "Micrographic" I have "Simple photo-micrographic apparatus," page 332, Hopkins Experimental Science, P. L., the last two letters meaning Public Library.



THE OLD OAKEN BUCKET
by A. J. SWANSON

Oftentimes a worker comes across short notes and formulæ on photography which he copies on a scrap of paper, or makes a clipping and promptly loses it. My way out of this difficulty was to commence a scrap-book (which I did about five years ago) by taking one of these common loose magazine binders, binding in a number of sheets of white paper (two or three hundred) and copying all such notes into the book. Similarly when I secure a clipping of photographic interest, from various sources, such as the trade drug magazines, newspapers, and others, I paste them in the same book. The pages are numbered and the articles are indexed like others (referring of course to "Scrap-book No. 1, page 15," or whatever it may be). Instead of doing this it might be better for some to have a number of cards headed "Figures, Facts and Formulæ" and copy interesting notes directly on these, but in my case it would make my index too bulky to follow the latter plan.

Every amateur possesses more or less of a library of photographic literature, especially photographic magazines; if he does not he should, and it is quite a task to find what you want in the way of information on some particular subject at times, necessitating digging through piles of magazines and examining the indexes of each one and then probably missing what you are seeking for on account of its being under a different title or probably not indexed at all. I, personally, at least, have had this trouble and as I am much given to experimenting and possess a large number of magazines and other literature relating to photography, I evolved the card index system above described to keep me out of continuous difficulty and save a tremendous amount of time. This system serves my purpose well as it is, but it could easily be enlarged upon by adding enough information to each title to form a key, as it were, to the article, hinting at what the same contains.

It may take the amateur many evenings to complete an index of this nature but its value when completed cannot be estimated, and it will certainly help any amateur (or professional) in his thorny path to success and aid in keeping him out of the state of uncertainty he is nearly always in. Perhaps I am wrong when I say "completed" because such an index is really never completed. Every new magazine or the acquisition of other new photographic literature will necessitate additions to the index but this is a labor of love and its value thus continually increases in a corresponding degree.

To secure a good general form in composition, it is necessary that it should be as simple as possible. A confused, complicated form may hide the art, but can never invite the attention. Horace, in his Art of Poetry, inculcates the same doctrine, *Denique sit quod vis, simplex duntaxat et unum*. Whether this is to be produced by a breadth of light and shade, which is often the case with Rembrandt, even on a most complicated outline, or by the simple arrangement of color, as we often find in Titian, or by the construction of the group in the first instance, evident in many of Raffaele's works, must depend upon the taste of the artist: it is sufficient to direct the younger students to this particular, their minds being generally carried away by notions of variety and contrast.

JOHN BURNET.

Aerial Perspective

By CHARLES R. OGILVIE

Perspective as applied to the graphic arts is of two kinds, linear and aerial. Concerning the former, the beginner in art be he of brush or pencil, has much to learn. Its study forms a most important part of his requisite training. With the photographer the situation is different; his lens attends to that part of the work. The fact that receding lines seem to converge toward a certain point is noted and recorded accurately by that instrument. Even though the focal length of the lens may govern the amount of such apparent convergence, which may be greater or less than would seem advisable in many cases, there is always a perfect harmony or relationship between the degrees of such convergence throughout the picture. Only by the greatest care can the artist with a less mechanical method secure the same exactness, an exactness that is demanded if the eye is not to be offended by an apparent lack of truth.

Aerial perspective on the other hand can cause the painter but little trouble. He has but to use his power of observation to a limited degree and with his skill in the use of his medium but slightly exercised he will hardly go far wrong. Trustworthy as are the tools of the photographer in other directions, in this phase of the work their reliability is sadly lacking.

The observation of the artist teaches him that objects seen by the eye at some distance do not appear the same in tone as they really are. This is owing to the intervening body of air. The greater the amount of this influence the greater will be the change in both color and tone. This is what is understood by aerial perspective. This time it is not a change of form but one of color. While the focus of the lens influences the amount of the convergence secured in the portrayal of the scene by the camera, the condition of the atmosphere regulates the amount of its influence upon the colors and tones of objects seen at different distances from the eye. Immediately after a shower of rain this effect may be almost entirely lacking. In some portions of the country under certain atmospheric conditions, distant mountains appear to be but a short distance from the beholder when miles may really interpose. In other cases the effect is of exactly the opposite nature. Ordinarily however, the intervention of a body of air results in a gradual deterioration in the brilliancy of color and a like degrading of the tone as the distance increases. As a rule this is supplemented by a tendency toward a bluish tone but sometimes a change in atmospheric conditions will result in red, violet or gray shades. It is by the recording of these changes that the painter is enabled so truthfully to represent the effect of distance as seen in nature. With him it is but the proper use of his medium that is required to give his work the power of rendering the same impression of distance as is observed in studying the landscape itself.

The photographer finds the rendition of this perspective due to the distance lying between himself and the different planes of his picture a much more difficult matter. The tendency of his tools is constantly in the direction of presenting these distant objects entirely too well defined, too heavy in color and too assertive as to value. The bluish effect which is taken on by distant objects only adds to his difficulty, owing to the actinic power of the light when so tinted. With color



ONE WHITE DREAM OF SNOW
by THOMAS A. MORGAN

sensitive plates there is a slight improvement but the employment of a color screen only tends to an increase in the falsity of the results. Reducing as it does the actinic value of the blue, the color screen simply adds to the heaviness of these objects at distant planes with the result that they come forward seemingly taking on a degree of assertiveness that makes them pass directly into the foreground. The feeling of distance is lost. In developing the plate one may often assist in a truthful rendition of the aerial perspective by a judicious holding back of the distance but this is not always possible. Occasionally in printing a little control can be exercised. With the usual printing processes there is little opportunity for much in this direction. In the gum-printing process there is more to be achieved. In working upon the negative our accomplishments may be made of greater value. Such parts as should be weaker on account of their distant position, can be covered with mat varnish, adding a light coating of lead to the more distant objects. Where foreground objects cut across the distance the varnish may be scraped away. A little observation of the effect produced by distance will enable the worker so to graduate his control that truth will result. This schooling of one's taste will early show the worker that his previous acceptance of the results given him by his camera has well-nigh destroyed his appreciation of truth to nature as seen by the eye. In much the same way does the photographer gradually learn to overlook the erroneous portrayal of color values as given him by his photographic plate. He comes to see the landscape, not in its true luminosity of colors but as he has learned to know it will be reproduced in monochrome of a false scale in his finished print.

Let the camera-worker convince himself of the lack of aerial perspective in the average photograph by examination of a few examples of landscapes, marine views and the like. How entirely lacking is any impression of space. How seldom will there be found that more or less subduing of the tone as distance be greater or smaller, which gives that realistic impression of space so necessary to the rendition of the perspective due to aerial intervention. Lacking as it so commonly is, it should be always present in every picture that claims to portray Nature as she lies before the eye of the beholder. Let us take an ordinary marine view as an example. A ship in the distance is rendered as dark in tone as one situated near at hand. It comes forward to the same picture plane as the latter. The effect is that of a smaller model simply placed a little higher upon an upright wall of water. Take a landscape showing a distant wooded horizon; the trees will be represented in the photograph as dark masses, rivaling in depth the heaviest objects in the middle distance if not in the foreground. The darkest green seen at such a distance looks black only when the darkness destroys its outline. Even in the softened light of twilight they are but a tone of gray. How lacking in truth then must be the portrayal of such distant masses as black against a sky that is white or nearly so. More serious still is the lack of impression that air and therefore distance lies between these distant planes and the eye of the beholder. In working to secure a correct rendition of these planes; in begging you to give your attention to aerial perspective, and in advising the consideration of this matter of tone values I am not making a plea for effect alone. A simple regard for truth in your work will give you all that I have desired to have you secure. A careful consideration of the subject together with a little observation will show you all too plainly that there is ample justification for my complaint.

Photography in England

By DR. H. D'ARCY POWER

In my last two letters I skipped any reference to my observations in England, because I felt that anything less than one or more letters devoted thereto would be wholly inadequate. And the reason for this is manifest. It was England that created amateur photography; that first gave commercial access to most of our modern facilities; that started the movement that has resulted in raising pictorial photography to a place among the fine arts, and that today shows a greater number of camera-workers to the population than any other country. Moreover, the dealer has not yet succumbed to the baneful influence of the trusts and an active competition offers to the public a constant stream of improvements and a choice of material in plates, papers and apparatus that is unknown on this side and under existing trade conditions is likely to remain so. Finally, Great Britain is a country of marvelous natural beauty, and that of a kind that lends itself to photographic treatment, so that taking it all in all England is probably of greater photographic interest to the touring American than any other place and this without any detriment to the splendid work that is being done both in France and Germany. Beyond these quite obvious elements of photographic activity there is much to be learned in the field of technical education. In the matter of state schools Great Britain is behind some of the continental countries, but is nevertheless far ahead of us. We have nothing in this country to compare with the excellent municipal school under the charge of Mr. Newton, where the technical applications of photography are thoroughly taught at reasonable cost. Again at the polytechnic school under the charge of Howard Farmer the course is such as to prepare the student for serious work not only in general studio methods but in trichromatic work. Speaking of color photography, there is in England as well as on the continent an increasing number of active workers. I have little doubt but that we in the States could do our share in the matter if it were not for the difficulty in obtaining material and apparatus. Our stock houses stock nothing for which there is not a large demand, and in many ways show a woful lack of enterprise. Why, for example, are we dependent on Europe for our carbon tissue and supports, and why, of the great variety of these supplied by the Autotype Company and many other makers, do we only get a few stereotyped varieties in demand by the professionals? But of this anon. To return to color photography, what we need is a simple and reasonably priced camera for making the three exposures, as a simple system of combined films and filters such as the Vidil system could supply. American ingenuity and enterprise ought to supply this want. But whatever is given us must be intended for serious work and not a toy, or the advent of color photography will be hindered rather than helped. Some months ago I gave an account of the Sanger-Shepherd system of color photography. Whilst in London I called on them and saw some very beautiful samples of their work, but how often the average man is able to produce such I am unable to say.

The independent position of the photographic trade to which I have referred is in no small degree due to the action of the English press. Numerically, England has not nearly so many journals as this country, but they have a much larger

circulation, and the four principal ones, namely, *Photography*, the *Amateur Photographer*, the *British Journal of Photography*, and the *Photographic News* are weeklies, widely read, and sold at the ordinary book-stalls. I know of only one monthly of importance, namely, our old friend the *Photogram*, to whose editor, Snowden Ward, I owe a debt of gratitude for the many kindnesses he showed to me, facilitating in every possible way my acquaintance with things photographic. Nor should I in the same connection forget Mr. Bailey, the genial editor of *Photography*. The journals I have referred to are decidedly ahead of us in wealth of reading-matter, but our best journals are their superiors in excellence of illustration, although *Photography* has recently greatly improved on the average in this matter and runs us pretty close.

Of professional photography I had little chance of judging beyond the impressions to be gained from an inspection of show-cases. As thus seen the average would seem to stand at a higher level than our own, less retouching and striving after effect, and consequently more natural characterization. A large proportion of the work is on platinum or what purports to be platinum and may be bromide. Fraud of this kind I was assured was not uncommon. One aspect of British commercial photography is very prominent, and attains to dimensions totally unknown on this side—I refer to commercial enlarging. Quite a number of large firms are entirely devoted to this work, and cater as much to the wants of the amateur as to the professional. The making of enlargements is by no means confined to that of bromide, but largely extends to the making of copies in platinum and carbon; these latter, of course, from enlarged negatives. The prices charged for this class of work are moderate and the work excellently done. For example, 20x16 bromides may be obtained for 50 cents, and finished and mounted copies for one dollar. Without doubt a similar trade could be worked up over here, if the right kind of men were to devote themselves to it, but good enlarging requires experience and skill, and is not likely to be successful if worked merely as a side line. I saw but little of amateur work as it was not the season for exhibitions, and some of the best work had been sent to St. Louis, where I trust most of my readers will have had an opportunity to see it. Several men prominent in photography here told me that there was a general feeling against sending exhibits to the States on account of the risk and costs, and that if the American were to judge by what he sees in his salons he would obtain a very inadequate idea of the status of English work. One phase of amateur photography I found quite interesting, namely, the work done by the photographic societies (what we call camera clubs). Both in Great Britain and on the Continent discussion and experiment have a much larger place than with us. Papers and demonstrations are the stock material of their meetings, not lantern shows and songs, and active discussion is the rule. It is thus that men are stimulated to achieve and we see the result in the large volume of work accomplished in Europe. It may be but little gratifying to our feelings but nevertheless helpful to know that one of the leading journalists summed up European opinion by asserting that apart from the work of the Photo-Secession photography was dead in America. This may be an exaggeration, but undoubtedly our contribution to the sum of investigation and discovery is lamentably small and will remain so until our few workers get together for mutual help and inspiration.

The serious purpose of English amateur photography is not only evinced by the national collections of photographs in course of formation but also by the excellent record work reproduced weekly in the *Amateur Photographer* (English), in which all workers are invited to help in the formation of a complete record of all buildings and places of interest throughout the country that time and progress must inevitably destroy. We have not the wealth of ancient ruins, and numberless remnants of a picturesque past that give zest to the work of our European confrères, but there is a past here the disappearing evidences of which are worthy of permanent record. Take for example the story of the settlement of California with its Spanish basis and American immigration, its "prairie schooners" and its trail of death. I remember a photograph taken by Alf. Monsen, the explorer, of the remains of the first party that found its grave in Death Valley—a piece of history more eloquent than any verbal description. This was taken years after the tragedy was consummated, but in the nature of things these rotting wagons and crumbling skeletons must disappear. Surely such a photograph ought to find a place of permanent record. But to return to pictorial photography it is evident that the workers in England, as in Europe at large, have an enormous advantage over us not only in castles and abbeys and ruined towers but in the nature of the country itself. In England the wealth and variety of deciduous trees, the almost constant use of hedges, flower embroidered, to delimit field and road, in place of our hideous wire fences; the fact that roads more usually wind than run straight, that bridges are of arched stone instead of straight iron, and that the bill-sticker is almost unknown; all these things make the task of picture seeking comparatively easy. Moreover, there is much greater variety there than with us. English civilization grew slowly from many different centers of varying origin, and while modern civilization tends to level all things beneath the heel of commercial progress, yet, outside of the great cities it is impotent to efface local differences that have grown through the centuries. They are enshrined not only in architecture, but in the domestic surroundings and local environment of the people, and thus afford a wealth of material to the artist that it were vain to look for on this side of the Atlantic. When I look at our disabilities I think we may congratulate ourselves on having done as well as we have. The photographic tourist can find almost any kind of pictures he may desire in England, except great mountain scenery, and the latter is little adapted to photographic picture-making. In the production of these a hill of 800 feet is as useful as a mountain of 8,000 feet. Aerial perspective is a greater factor than with us and the number and intensity of the greens in a landscape are more numerous than is usually the case on this side, for which reasons the use of orthochromatic plates and a color screen is to be strongly recommended. Among the localities worthy of special attention is London itself. There is a tendency to look at all great cities as being alike and ill adapted for picture-making. But London is full of old fragments buried in the heart of the great metropolis that are pictorial in the extreme. The old city churches are worth special attention.

It may be of interest to mention the apparatus I used on this four-months' trip, and which I believe it would have been difficult to improve upon. My constant companion, without which I never stir, is a 3A Folding Pocket Kodak with a plate-holder back. It is easy to distribute half a dozen plate-holders among the



MORNING ON THE POND

BY IRVING W. JONES

coat pockets. These are charged with Seed's orthochromatic cut films and weigh very little. Why do I use a focusing back? Because I carry with me an Adon telephoto lens, which is simply invaluable, but to use it to the best advantage the other lens should be removed, which is not possible with a roll film in position. I carry with me a couple of spools so that if I exhaust my holders before I can change, I can go on with the spools. With this outfit it is possible to take anything that does not imperatively demand a swing back, and by the use of the telephoto it is possible to get a position where this is seldom imperative. For special work I have in my trunk a long draw, 5x7, with an 11-inch Turner-Reich anastigmat. My Adon telephoto can be used on this also, being equivalent at full draw to a 40-inch lens. My pinhole plate can be used on both cameras, and some of the best work I have accomplished has been done by it.

In all objects in nature there is something predominant, and which alone has struck the observation of every one. If the artist gives that, he brings his object at once home "to men's bosoms," and without which his greatest labor is but industrious trifling. The character of an object depends upon a particular color, a particular touch, a particular concentration or diffusion of light, according to its form or substance; to obtain which ought to be the constant study of the student, as it is the language of his art, and the only language universally understood.

JOHN BURNET.

Fourth Annual Convention of the Photographers' Association of the Pacific Northwest

Tacoma's Masonic Hall was transformed into a picture gallery and museum of art during the Fourth Annual Convention of the Photographers' Convention of the Pacific Northwest which opened September 21, 1904.

The work was far ahead of that of previous Conventions, and the attendance greater and much more enthusiastic than ever before. It is impossible to give an absolutely correct list of the members present, as they continued to register with the secretary up to the closing day of the session. The following list, however, will show how well the Northwestern galleries were represented: Milton Loryea, Spokane; H. D. Loomis, South Bend; F. L. Hacking, Vancouver, B. C.; L. H. Seely, Everett; R. O. Cooper, Seattle; Charles Bedford, Tacoma; Mrs. Milton Loryea, Spokane; Mrs. M. A. Swope, Astoria, Ore.; B. J. Brush, Everett; G. G. Cantwell, Everett; Mrs. B. J. Brush, Everett; O. W. Pautzke, Ellensburg; E. Keene Lowe, Victoria, B. C.; Mrs. M. C. Lewis, Salem, Ore.; A. D. Smith, Salem, Ore.; Paul Lehmann, Tacoma; Ernest Peterson, Tacoma; A. French, Tacoma; T. L. Kirk, Snohomish; Miss Clara Rigby, Everett; S. Ames, Portland; George Braas, Seattle; Leo Hetzel, Port Angeles, Wash.; T. J. Cherington, Dallas, Ore.; L. J. Rosslow, Spokane; Mrs. William Smith, Roseburg, Ore.; F. M. Ingalls, Missoula, Mont.; H. W. Oliver, Oakland, Cal.; W. A. Raymond, Moro, Ore.; H. P. Eggan, Moscow, Idaho; Miss Sue Dorris, Eugene, Ore.; J. D. Drake, Silverton, Ore.; F. W. Loschenkohl, Carbonado; William B. Rush, Clatskanie, Ore.; W. S. Gardner, Corvallis, Ore.; H. C. Hayes, Portland, Ore.; C. Butterworth, Portland; W. A. Hudson, Pullman; J. E. Ralston, Seattle; Josuke Kuneyasu, Seattle; F. J. Lee, Tacoma; E. Hueston, Tacoma; Mrs. A. L. Jackson, Tacoma; A. L. Jackson, Tacoma; J. B. Holm, Bellingham; W. H. McNeal, Almira, Wash.; H. B. P. Eggan, Seattle; Earl Crom, Seattle; Wadds Bros., Vancouver, B. C.; J. P. Aaberg, Tacoma; F. La Roche, Seattle; A. F. Murphy, Seattle; W. W. Dames, Seattle; Miss Alice Hetrick, Salem, Ore.; P. L. Hegg, Bellingham; C. H. Ruffner, Seattle; Henry B. Petridge, Seattle; B. C. Collier, Wenatchee; The Mecca, Seattle; C. W. Bart, Tacoma; F. La Roche, Seattle; A. F. Murphy, Seattle; W. W. Dames, Seattle; Miss Olympia; Mrs. J. J. Harden, Stayton, Ore.; T. W. Tollman, Spokane; J. L. Phelps, Spokane; B. Danihy, Toledo, Wash.; C. E. Fulmer, Port Angeles; A. D. Rogers, Olympia; G. M. Strong, Portland, Ore.; R. T. Parker, Baker City, Ore.; W. G. Emery, Corvallis, Ore.; H. J. Burge, Seattle; J. K. Rose, Seattle; H. L. Richardson, Portland; F. L. Wellington, Seattle; Lucas L. Gardner, Seattle; John A. Dahlgren, Denver, Colo.

The photographs exhibited represented nearly, if not every State in the Union. The interstate exhibit alone contained examples of work from fourteen different States, while the California Loan Exhibit, which had been forwarded by the Photographers' Association of California, was made up of pictures from all the more prominent studios of San Francisco. These pictures proved quite a valuable addition to the collection. A rare feature in the line of exhibits was a set of amateur pictures



PHOTO BY F. J. LEE

THE PHOTOGRAPHERS OF THE NORTHWEST ASSOCIATION AT CANYON VIEW

by Chas. Bedford of Tacoma. Mr. Bedford has for years been a close student of photography, and is said to have made more progress along the line of photographing in colors than any other man in the Northwest.

No business was transacted during the forenoon of the first day, the time being given to the final arrangement of the exhibits, distribution of badges, and payment of dues. At 2 p. m. President Milton Loryea introduced Mayor George P. Wright of Tacoma, who welcomed the Convention in the following happy manner:

"Mr. President, Ladies and Gentlemen of the Photographic Association of the Pacific Coast: The fact that the photographers of the Pacific Coast are here met in convention assembled is of itself a testimonial that you are a desirable class of people to meet; it shows that you are imbued with modern spirit of the times; that you realize the necessity of advancement in your business; that you realize the importance of conferring together, and doing all of those things which will advance the interest of your profession and carry on to a greater degree the advancement of the work.

"I am not very familiar with the work of photography, in fact I don't even belong to the brigade of kodak owners, but I do know that the history of picture-making is comparatively a recent one, but that great progress has been made in the last half of the eighteenth century, but that is not at all strange, because of the modern inventions for the use of the photographer,—just as the mowing machine has taken the place of the scythe, and the thrasher of the flail, also modern locomotion by steam on the railroad taking the place of the old-time stage coach; so the photographers have made great progress. I remember the first picture I had a chance to sit for when a small boy. I was told to get into position, sit up straight and look pleasant. I was quite tired out, and don't think I looked very pleasant, owing to the time that I had to sit for the exposure. Now it is all done in a flash, just as soon as the poser is in position the photographer makes a snap and it is all over. You are to be complimented on your energy, and the spirit which prompts you to get together and hold conventions. We want the best photographers in Tacoma, and we know that when the photographers in our City take part in conventions and give their attention to this work that we will have the best here, and thus we will see that this Convention will certainly result in great good to us all.

"On behalf of the City of Tacoma we are glad to welcome you, the representatives of the different cities of the Northwest; we are glad to have you here, and we hope that you will enjoy your visit, and that this Convention will be both pleasant and profitable. We hope that you will be so well pleased that you will see fit to come here again and hold your Convention.

"We feel like apologizing for the torn up condition of the streets and sidewalks at present, but when we explain in extenuation that we are just having a municipal housecleaning, and that we are making an effort to put the streets in better condition we know that you will excuse all that.

"Ladies and Gentlemen, let me repeat on behalf of the citizens of Tacoma that I extend to you most cordial greetings, and hope that you will have a most pleasant time during the Convention."

PRESIDENT LORYEA: "Mayor Wright, the fact that we have chosen this for our meeting-place twice will naturally prove to you that we like Tacoma pretty well, and we promise at some future day to come back again. I can't hardly realize

that we are here so quickly again, but it is all due to the personal pride of your citizen photographers here who are certainly to be complimented on their public-spiritedness; they didn't let any grass grow under their feet when they made up their minds that Tacoma should have us, and we hope to come again.

"I do not pose as an orator or pretend to make a speech, if I did I would *expose* myself and feeling of hilarity bers, and my wife I got home so the platform, or at the Conven-

The roll call D. Trover, Secretary, showed but two absentees, J. W. Britain, State Vice-president, F. Stamper, State Montana, and C. Idaho. A communication was read from H. C. Hayes of Portland. A request from C. R. Reed, of the National Association, asking that this Convention forward an exhibit of was also read. Motion was made by Past President Jackson, and seconded by A. D. Rogers, that ten pictures be selected from the Association's exhibit, and expressed to the National Association which motion was unanimously carried. President Loryea appointed A. L. Jackson, George Braas and Charles Butterworth to act on this Committee.

Notice was given by President Loryea that a motion would be made to amend the Constitution and By-laws as regards the election of officers, at the next meeting, which would convene at 8 P. M.

President Loryea explained to the members of the Association that he had had designed a button for the general use of the Association, showing a lens, barrel and flange, sample of which he exhibited; it seemed to meet with the approval of everybody present, and thereupon O. W. Pautzke made a motion that the button be adopted, which motion was seconded by Frank H. Doyle. Motion unanimously carried. The work of soliciting funds to manufacture these buttons was successfully carried out by Miss Sue Dorris, and at the close of the afternoon session it was found that a sufficient number of the members had given orders for buttons to make it possible to go ahead with the manufacturing of same.



MOTHERHOOD

(COPYRIGHTED) BY H. D. TROVER

would *develop* a among our mem- would *fix* me when I couldn't *mount* *finish* my work tion."

of officers, by H. tary, showed but W. Britain, State Montana, and C. Vice-president of nication was read of Portland. A re- Reed, of the Na- asking that this ward an exhibit of was also read. Mo- Past President onded by A. D. pictures be selected tion's exhibit, and National Associa- which motion was ried. President A. L. Jackson, Charles Butter- this Committee.

given by President tion would be made stitution and By- the election of offi- meeting, which 8 P. M.

yea explained to Association that he

Short talks were made under the head of "Good for the Association," by A. D. Rogers, Miss Sue Dorris, O. W. Pautzke, Secretary Trover, J. B. Hann and A. F. Muhr.

President Loryea also requested the Demonstrators to give five-minute talks on Convention work in general, and in response to this call Frank H. Doyle of the General Aristo Co., H. W. Oliver of the Seed Dry Plate Co., and Will Lussier of the Cramer Dry Plate Co., addressed the photographers.

As there was no other business to come before the Convention, it was moved and seconded that the Convention adjourn until 8 P. M. This motion was carried, and the rest of the afternoon given to the study of the different exhibits and an inspection of the exhibits of the manufacturers and dealers. Displays or desks were installed by the American Aristotype Co. and represented by Frank H. Doyle; the Eastman Kodak Co., represented by H. L. Richardson; M. A. Seed Dry Plate Co., represented by H. W. Oliver; G. Cramer Dry Plate Co., represented by Will Lussier; the Hammer Dry Plate Co., represented by J. K. Rose; The Stuparich Manufacturing Co., represented by Wm. J. Helmquest and J. T. Bertrand; The Gailey Supply Co., represented by H. B. Petridge and Paul Shaw; C. W. Parker & Co., represented by C. H. Ruffner and Mr. Lawrence; Kirk, Geary & Co., by L. D. Hicks and the Camera Craft Publishing Company.

September 21st, 8 P. M.—Night Session

President Loryea appointed Mr. Brush a committee of one to pass around a hat and collect questions for the question box, which feature of the Convention has always been interesting and instructive. He also stated that while the Convention was waiting for the questions he would appoint Messrs. F. J. Lee, A. L. Jackson, Chas. Butterworth, L. H. Seely and W. G. Emery as a nominating committee to nominate officers for the coming year.

PRESIDENT: The question up before the house this morning, and to be decided tonight was the amendment of the By-Laws. It is deemed advisable to elect the officers on the evening of the second day instead of the morning of the second day in order to utilize the daylight for printing and demonstrations and the night for business meetings.

It was moved by Mr. McNeal and seconded by Mr. Emery that the Constitution be amended as read. The motion carried.

PRESIDENT: I hereby move that our Constitution Article II be amended; it now reads, "The officers of our Association shall hold office one year from the first day following their election, etc. The amendment as proposed would read, "The officers of our Association shall hold office from the 1st of January to December 31st."

Mr. McNeal moved that the article be amended, seconded by G. M. Strong. The motion was unanimously carried, and the Constitution will be so amended.

At the close of the business meeting F. H. Doyle gave a demonstration of the new Aristo Printing Lamp. The work is done by means of an arc-lamp that burns a violet ray. It is claimed for this process that it prints quicker and does better work than sunlight, showing none of the imperfections noticed in work done by sunlight. This appliance proved the sensational feature of the Convention and

Mr. Doyle succeeded in convincing the photographers that the happy possessor of an Aristo Lamp would be absolutely independent of the weather.

Thursday, September 22d

The entire day was given over to the School of Photography under the supervision of Ex-presidents A. L. Jackson and Charles Butterworth.

Demonstrations were given in negative making, portrait lighting, printing and toning, development papers, platinum and carbon printing. F. H. Doyle of the American Aristotype Co. demonstrated aristo, platino and collodio-carbon paper. (Not to be confused with bromide papers.) Skylight demonstrations of portrait lighting and negative making were given by H. W. Oliver of the Seed Dry Plate Co.

September 22d, 8 P. M.

PRESIDENT: We will now have the report of the Nominating Committee.

A. L. JACKSON: The choice of the Nominating Committee is as follows: For President, H. D. Trover of Salem, Oregon; Secretary and Treasurer, Charles Butterworth of Portland, Oregon; Vice-president, E. W. Moore of Portland, Oregon. Vice-presidents for the States represented in the Association were named in the following order: Idaho, H. P. Eggan, Moscow; Montana, F. M. Ingalls, of Missoula; British Columbia, Howard H. King, Vancouver; Washington, F. J. Lee of Tacoma; Oregon, A. G. Churchley of Portland. These officers were elected without a contest, the choice of the Nominating Committee being ratified unanimously.



FATHER TIME

BY W. G. EMERY

In reply to demands for a speech from the new President, Mr. Trover replied: "Ladies and Gentlemen, I really am not a talker, or speech-maker, or anything of that kind, but I thoroughly appreciate the honor that you have bestowed upon me, and I shall endeavor to the best of my ability to fill the office faithfully. I have tried to do my duty as Secretary-Treasurer of the Association, and I shall endeavor to try to meet with the approval of the Association in 1905.

P. L. Heggen made a motion that the next Convention be held at Portland, motion was seconded by F. M. Ingalls.

PRESIDENT: It is moved and seconded that the Secretary cast a ballot for Portland as the unanimous choice of the Convention for the next meeting. All in favor of this motion that the Secretary cast a ballot for Portland as the next meeting-place, say Aye. Motion unanimously carried.

SECRETARY: I cast the ballot in favor of Portland as the next meeting-place of our Association.

L. H. SEELY: I make a motion that the California Association be invited to join us at Portland in 1905.

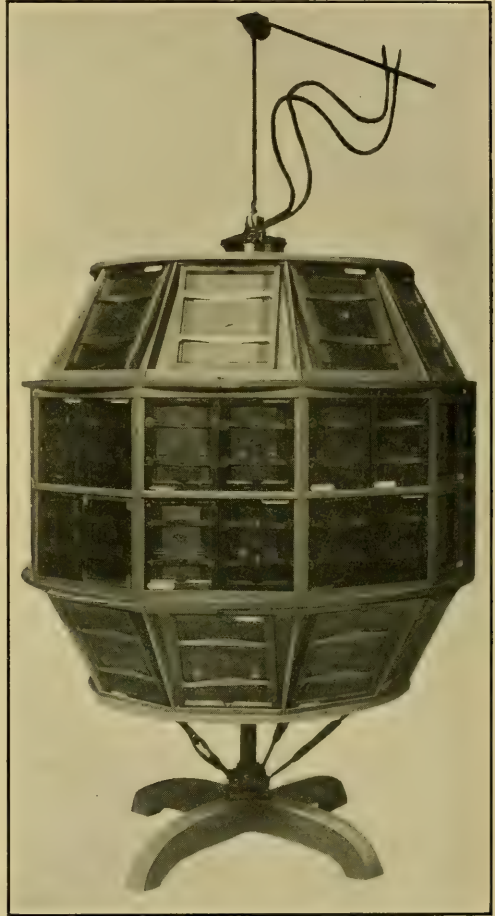
W. G. EMERY: I second the motion.

A. L. JACKSON: You all know that it is a fact that we expected to try to secure the National Association in 1905; we were working against California. We would like to make the amendment so that it would read that instead of attempting to secure them, that we relinquish that claim, and instead, invite California to participate with us in 1905, and that we in return attempt to secure the National Association for California in 1906, and all go in a body to California. We would like to make that as an amendment.

A. D. ROGERS: I second that. Motion unanimously carried.

It was suggested by Mr. Hicks that if this invitation were reduced to writing and forwarded to the California Association, they would undoubtedly accept the same. The President requested Secretary Trover to see that the invitation was so presented to the Californians. The same committee appointed by the President to choose pictures for the National Convention were requested by him to continue the good work on behalf of the selection of an exhibit of about fifty pictures for the California Convention to be held in San Francisco next month.

With the election of officers for the coming year, and with the selection of Portland as the next meeting-place for the Convention, all business was practically disposed of, and the remainder of the evening was given over to amusement.



THE ARISTO VIOLET RAY LAMP

Friday, September 23d

The day was again devoted to demonstrations. Past President A. L. Jackson assisted by several members of the Demonstrating Committee received the visiting photographers at his studio where special lighting and posing effects were explained, under the skylight, and the difficulties of Carbon Printing were thoroughly gone into. Will Lussier of the G. Cramer Dry Plate Co., and Mr. Rose of the Hammer Dry Plate Co. gave thorough and interesting demonstrations of difficult studio

work and endeavored to convince their pupils that their particular make of dry plates were best fitted to the requirements of the Northwestern studio.

8 P. M.

The evening session opened with a demonstration of electrical studio appliances by President Milton Loryea. Mr. Loryea explained the advantages of electric lights for picture taking as well as enlarging, the printing of developing papers and rapid newspaper work. He proved himself an expert electrician as well as a photographer of the highest grade, and CAMERA CRAFT congratulates itself upon having secured the promise of a series of articles on Electrical Photography by Mr. Loryea.

The selections as announced by the Committee instructed to select pictures for the National and California Conventions were as follows: For the National Exhibition, one portrait being taken from each collection: John Savannah, of



PORTRAIT PANEL

BY GEO. BRAAS

Victoria; C. Elmore Grove, J. C. S. Aune, E. W. Moore, of Portland; J. B. Hann, of Bellingham; A. L. Jackson, of Tacoma; George Braas, E. S. Curtis, of Seattle; Milton Loryea, of Spokane. For the California Exhibition pictures were selected as follows: J. Savannah, three; C. Elmore Grove, four; J. B. Hann, two; W. G. Emery, one; George M. Strong, one; E. W. Moore, two; A. L. Jackson, three; George Braas, five; Charles Butterworth, four; Wadds Bros., three; Miss Sue Dorris, three; H. D. Trover, one; Milton Loryea, six; Charles Bedford, six.

Charles Bedford, of Tacoma, contributed greatly to the pleasure of the meeting by a stereopticon exhibition of views taken along the Tacoma Eastern Railroad and in Paradise Valley well up toward the summit of Mount Tacoma. The views were the pick of many that Mr. Bedford has taken in this region and they were splendidly reproduced on the canvas. At the close of the exhibition an invitation was extended the members present to make the trip up into the region portrayed, as guests of the manufacturers and demonstrators having exhibits on the floor, and this was promptly accepted.

An invitation was also tendered and accepted to visit the Ferry Museum. On motion the photographers' magazine, CAMERA CRAFT, was made the perpetual official organ of the Association. Next came a stereopticon exhibition of pictures from the



SNAP-SHOTS TAKEN ON THE PARADISE VALLEY TRIP

California exhibit taken for the purpose of eliciting criticism from the members, and this proved one of the most interesting parts of the program. Another pleasant feature of the day was the presentation of a splendid cut-glass vase to President-elect H. D. Trover by members and demonstrators in recognition of his services to the Association in his capacity as Secretary and Treasurer for the past year. The presentation address was made by L. D. Hicks in a sincere and happy style, to which Mr. Trover responded with much feeling.

After enjoying some delightful music rendered by an orchestra composed of some young people of Tacoma, and two delightful solos by Dr. Wilson, the President announced that the business of the Convention having been disposed of the next day would be given over to having a good time and visiting the scenes that had been shown on the canvas earlier in the evening. This excursion was under the directorship of Charles Bedford, whose excellent management cannot be too highly complimented. Every comfort was provided to make this trip enjoyable, even to a most delightful lunch. Everything went off without a single hitch—no effort being apparent on the part of Mr. Bedford, who nevertheless was alert and never-tiring from start to finish. Two or three stops were made to view bits of scenery which were unusually grand along the road, and on the first stop the party were provided with a special engine and two flat cars which took them up to visit the famous electric plant which supplies the Puget Sound country with electricity.

At Canyon View F. J. Lee, of Tacoma, made an excellent group of the photographers which is reproduced on another page. The snap-shots which make up the group of pictures also shown in this number were made by several of the members, kodaks and films having been provided by the Eastman Kodak Co. through their popular representative, H. L. Richardson. The bear whose prominent position in this set was well earned, has not been requested to write his memories of this visit, for sufficiently good reasons.

Mr. Bedford brought his special train into Tacoma at 5:30 sharp. And the tired but happy "Look Pleasanters" voted the Fourth Annual Convention a perfect success.

Preston E. Anderson's article, "Filtered Sunlight," which appeared in the last issue of CAMERA CRAFT was illustrated by the well-known amateur, Edward D. Whitney. It was not the intention of the publishers to deprive Mr. Whitney of the credit due him for the reproduction of such unusual and meritorious work. But there's many a slip 'twixt the copy and press.—EDITOR.

Every varying tone has a relation to every other that gives a value to it, which is marred or frequently lost altogether if it is not truly rendered. This is so well understood in France that special study is given to relative tones or "values" till a mastery is obtained in dealing with them, and that gives the great strength of the French school as opposed to the English. Choose a subject where the relative tones are simple and plainly marked, and the masses are not too complex.

ELLIS.

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX.

SAN FRANCISCO, CALIFORNIA, NOVEMBER, 1904

No. 6

Special Notice

The next issue of CAMERA CRAFT, while not differing from this or recent issues in form, make-up or style, either in contents or typographical appearance, will be a special number. It will be such only in order that it may be bound up with the six numbers preceding it, and to that end the index for the volume now being published will form a part of and include the contents of that issue. This will enable us to start the new volume with the January issue, and, besides the added convenience to such of our readers as wish to bind their copies, so doing will permit us to be more timely in making a few betterments that we have in view, than is possible at the beginning of a new volume as at present dated.

Originality Its Own Reward

The last issue of one of our Eastern contemporaries contained an article in full as it appeared in the first few pages of our June issue, crediting it to a small photographic magazine published in the Southwest. The last issue of a popular magazine, claiming an enormous circulation and certainly able to pay for original contributions, reproduces a series of pictures together with an article that at best is but a rehash of subject-matter which appeared in our own pages about two years ago, and using the same illustrations. Another, this time a weekly, which claims even a larger circulation, has a cover design for its last issue that is copied almost line for line from an illustration used in a recent series in these pages. Other cases might be cited but it is not my desire to catalogue such; simply to call attention to the fact that originality, while evidently not considered as exactly a virtue by some publishers, is, seemingly, in their estimation entitled only to the same reward as we have been taught is accorded that most praiseworthy attribute. Their own ambition no doubt prompts them to assume such qualities as claim for their reward more tangible receipts. We have no specific complaints to enter. The first publication mentioned is uniformly careful to give full credit to the best of its knowledge. The magazine from which it copied the article can no doubt

claim a printer's omission as its excuse. The second magazine could possibly claim that the author of the article resold it to them and that it was used as original in good faith. The last can easily lay the lack of originality at the door of the designer who serves them at so much a design, supposedly original. At the same time it seems that a publisher with a regard for the rights of his readers should adopt some plan that will at least safeguard him from the mistakes or worse of writers, illustrators and printers.

The California Convention

The Convention that will be held in the Mechanics' Pavilion in this City the last week in October by the Photographers' Association of California promises to be a great improvement on the previous one of a year ago. Hard as it may seem to outdo that effort, the possibilities at the command of those in charge of the coming gathering are much greater. That full advantage will be taken of this increased possibility is an assured fact. The hearty endorsement so unanimously accorded the first convention by the photographers of the State awakened the manufacturers to the fact that a like gathering was well worthy of their best efforts in putting forth the advantages of their different lines. The educational features incorporated in the first convention not only demonstrated the value of attendance at such conventions to the isolated workers but having met with such appreciation, these features have invited greater efforts from those responsible for their presentation and in the coming convention, little will be left undone that can in any way increase the value of such work. The length of time at the disposal of those in charge being greater, the pictures placed on exhibition will be of added interest and increased number. Several possible epoch-making utilities will be placed before those photographers fortunate enough to be in attendance; utilities that promise more definite and more tangible results than did, at their first presentation, several of our most commonly accepted working methods of today. Every photographer in the State who is worthy of the name will certainly be in attendance. A full report of the proceedings will be given in our next issue.

OCTOBER 26th

- 9:00 A. M. Opening of the Convention.
- 10:30 A. M. Annual Address by President O. H. Boyé.
- 11:00 A. M. Art Lecture and Criticism of Photographs by G. W. Gamble.
- 1:00 P. M. Defender Paper Demonstration.
- 2:00 P. M. Demonstration on Ammonium Chloride Printing Process by W. H. Lange.
- 3:00 P. M. Studio Lighting Under Sky-light, Boyé Studio.
- 8:00 P. M. Public Exhibition and Promenade Concert.

OCTOBER 27th

- 9:00 A. M. Demonstration of American Aristo Papers and the new Aristo Printing Lamp.

- 11:00 A. M. Art Lecture by L. P. Latimer.
- 1:30 P. M. Business Talk by L. D. Hicks.
- 2:00 P. M. Heart to Heart Talks by Members.
- 3:00 P. M. Manufactures.
- 7:00 P. M. Cooper-Hewitt Light.
- 7:30 P. M. Eastman Bromide Demonstration.
- 9:00 P. M. Monarch Printing Papers.

OCTOBER 28th

- 9:00 A. M. TO 12:00 M. Demonstration Under Skylight by O. H. Boyé.
- 1:30 P. M. Platinum Demonstration by George Peters.
- 2:00 P. M. Carbon Printing by G. H. Wilton.
- 3:00 P. M. Election of Officers.
- 9:00 P. M. Grand Ball.
- Flashlight Pictures.

With the Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Bichromate Poison

A great deal of trouble has been caused during the past summer by bichromate poisoning. But if we speak of it that way we should say "potash poison," because that is most likely what causes the trouble. We all know how dangerous most of the potash compounds are, particularly cyanide of potash. Iodide of potash which most engravers use is known for its pronounced effect on the blood. An examination of spots caused by bichromate potash (or ammonia) shows that the disease is in reality a sort of dermatitis. That is the reason one man will take it and another will not. The disease really exists all the time and the potash acts as an irritant that causes inflammation. Very poor soaps will have the same effect on some people, but, of course, not so intense. If you have this trouble there is really only one thing to do—stop work. Get away from bichromate of potash, wash the spots often in warm water and do not tie them up. Most likely you will be able to work in a few days. But if the case is so far gone as to make a physician necessary be sure that your man knows what he is about. In cases of trouble of this kind (which is very, very rare), the physician is likely to jump to the conclusion that the spots are of a syphilitic nature and give you mercury, as one engraver found out to his cost within the last year. However, prevention is better than cure and this can be accomplished by either collodion or the rubber stripping solution which can be found in every shop. Rub either of these over the hands and arms before beginning work and you are quite safe. Of course it's a little trouble to wash these off every night, but "eternal vigilance is the price of liberty."

Silver Bath Trouble

E. L. Dietz, Oakland, writes: I have trouble with my silver bath. I am only doing line work but every little while my bath fails to work, although it is up to the right test. It goes all right for awhile and then it gets streaky and gives a very thin image. *Answer:* In all probability your trouble is due to dirty glass. Unless you have a regular system of cleaning you will overlook a great deal of dirt from time to time and it will puzzle you to know what the trouble is. You might put a dirty plate into the bath and get a good negative on it, but it would upset the bath and the next dirty plate to go in would make matters worse. After a time even a clean plate will fail to work so contaminated has the bath become. Soak your plates in lye, wash them off well and then clean with chalk and ammonia. Rinse under the tap and set up to dry. Before using, polish with dry chalk and be sure there are no dirty spots anywhere.

The Largest Photo-Engraving House

There has been considerable discussion lately as to where the largest photo-engraving establishment is located. Carl Hentschel of London, England, lays claim to the distinction. He says: "I think I may fairly claim to have more hands under my direct control than any other process firm in the world. At the present moment I am employing some four hundred hands, or to be quite exact, three hundred and eighty-two; but as we are still building further studios, which we hope to have finished in a few months, the present number of our hands will then be increased to four hundred."

Club Notes

News Items From the California Camera Club

By C. A. GOE

Auction Sale

The recent auction held in the Camera Club rooms was a most successful affair, resulting in large profits to the Club and giving in addition no end of amusement to those who attended. Through the courtesy of the San Francisco photographic dealers large contributions of stock were received by the Committee so that the sale was something more than the usual Rummage Sale. Mr. Kemp was on hand with his moving-picture machine, showing some films exhibited for the first time in San Francisco. Later, refreshments were served by the Entertainment Committee, and another enjoyable evening was added to the long list of successful entertainments given under the auspices of the Club.

The American Federation

The California Camera Club and San Francisco Art Association have about decided not to affiliate with the Federation this year, but the Salon Committee appointed by President Curtis Bell will endeavor to secure a creditable contribution of photographic work from this Coast for both the First American Salon and the American Federation. The complete announcement of this Salon Committee is given in these columns.

San Jose Outing Camera Club

An invitation has been extended to the San Jose Outing Camera Club to attend the next Monthly Exhibition of the California Camera Club at the Alhambra Theater, and it is hoped that several of our San Jose friends will avail themselves of this opportunity to become acquainted with the members of the San Francisco club.

California Camera Club Demonstration

On Wednesday evening, October 5th, John Beeby read an interesting lecture on the "Manufacture of Lenses," illustrating same with a series of lantern-slides showing the

machinery and manufacture in great detail. In addition a number of lenses were exhibited, showing the progress from rough glass to the finished lens. The rooms were well filled. The following demonstrations are in preparation to be given at early dates: "Exposure," by Gilbert Hassell; "Development," by Mr. Hassell, and "Lantern-slide Work," by Mr. Beeby. This branch of the Club work is under the direction of Messrs. Sewell, Poehlman and Clute.

Print Exhibition

A very creditable exhibition of portraits and landscapes is now being held in the Club rooms, being the work of Miss Grace G. Harvey, an enthusiastic member and worker of the Club.

Monthly Exhibition

The Monthly Exhibition of the California Camera Club will be held at the Alhambra Theater on Friday evening, October 28th, at which time Dr. Emily Noble will deliver a lecture on the St. Louis Fair. Dr. Noble is known to Camera Club audiences, having presented her lecture on the Brahmins of India some time ago.

For half an hour before the lecture begins the following musical program will be given by G. M. Marks on a Cecilian Piano Player:

March, "The Cavalier".....*Harris*
Selections, "Isle of Spice"....*Schindler*
"Elevation"*Chaminade*
"Retrospect"*Lipscomb*

During the intermission selections will be presented as follows:

"A May Morning" (Denza), D. M. Lawrence.

"Fifth Nocturne" (Leybach), A. F. Worbes.

"Love's Sorrow" (Shelley), Messrs. Lawrence, Worbes and Marks.

This certainly assures a most delightful evening for the Camera Club members and their friends at the next Monthly Exhibition.

The Amateur and His Troubles

By FAYETTE J. CLUTE

Film-Pack Speed

Several of my correspondents have recently written to ask my advice concerning the Film Pack; the question of speed seeming to be the most important. One mentions the fact that the Wynne meter gives them a rating of several figures lower than the popular brands of rapid plates. I have wondered where the idea originated that the Film Pack was slow and this must account for it. In my own practice I have always found them equal to any reasonable demand and at an evening hour, particularly at this time of the year when the light is inclined to be yellow, I have often found myself badly over-timing. The last speed card of the Wynne people has just come to hand and on it I find the Film Pack given as high a number as the most rapid plates. I can assure my correspondents that they have little to ask for in the way of rapidity and much to be thankful for in a number of other directions.

Shortening Time on Interiors

I tried an experiment the other day that I have seen recommended in some of the magazines. I was making some interiors; some that were so dark that I could hardly see a thing on the ground glass; in fact, I had to move the camera up close to the only window and use it as a guide to get the right focus. I then carried the camera back to where it was to stand for the picture to be taken. I stopped down to *f*-32 and gave about five minutes, began to get tired, thought of the plan I had read and carefully enlarged the opening of the iris diaphragm to *f*-16. Thinking it over I made up my mind that if a little of such practice was a good thing I would try more, so I again opened the iris, this time to its full capacity. The first exposure was five minutes, the second, three and the last, two, making ten minutes all together. I am sure I could not have obtained as fully a timed negative, giving forty-five minutes with the original stop; in

fact, the stops as used were equal to giving fifty minutes with *f*-32. Quite a difference between ten and fifty is there not? The negative was all that could be desired in the way of softness and roundness while at the same time lacking that want of definition that the use of a large stop throughout would have given. I tried another, reversing the process and using the largest stop first but the results were not so pleasing. The first method gives much better returns. I have heard that the same way of working gives fine results in copying when it is desired to avoid the grain of the paper. The focus should be so arranged that the large stop leaves the image a trifle out of focus. I have not had an opportunity of giving the method a trial but it looks promising.

Iridescent Fog on Negatives

A correspondent in Montana writes that some of his negatives have a metallic deposit on the surface that by reflected light shows bluish red and green. In some cases it is so pronounced that it shows in the print. He desires to know the cause, and also how it may be removed. This stain is known as disroic fog and makes its appearance on old plates, particularly where forcing has been resorted to in the development, and where a caustic alkali has been used. It is quite common where ammonia is used as the accelerator. Where it is confined to the surface of the film it can be removed by rubbing with alcohol, using a soft cloth for the purpose. When it extends into the film a more difficult problem confronts us. Perhaps the most promising method of removing it would be to make a ten per cent solution of caustic soda, and soak the plate in water containing five drops of this solution to the ounce. As the bath darkens, pour it off and apply fresh. When the plate is well washed and dried the stains will, no doubt, be found to have disappeared. The use of an acid fixing bath is recommended when the appearance of such stains is feared.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Sepia Toned Bromides

Among the many ways of producing brown tones I note two that I have not seen before. The first is quoted by the *English Amateur Photographer*, and is as follows:

- A.—Neutral potassium oxalate. 300 parts
Water1,000 parts
B.—Potassium chloride 130 parts
Water1,000 parts
C.—Iron sulphate 24 parts
Citric acid 2 parts
Potassium bromide 2 parts
Water 500 parts

After exposure, the paper is first soaked in water until flaccid, and is then developed with the following mixture:—A, 20 parts; B, 5 parts; C, 5 parts. Further additions of B tend to increase the warmth of the tone. Development and fixing are carried out in the same way as usual.

The second formula occurs incidentally in an article on intensification by C. Winthrope Somerville. It is as follows: "Treat the print to be toned in a bath consisting of potassium ferricyanide 50 grains, water 4 ounces, ammonia 10 per cent, 50 minims. This will discharge the color of the print converting it into ferrocyanide of silver. Now redevelop with metol-hydrochinone and it will reappear of a beautiful and true sepia color."

Small Stops and Halation

A writer in the *British Journal of Photography* states that the use of small stops is a cure for halation. I have no personal experience of this, except in the matter of pinhole photography, in which I think I can agree with the writer that halation is rarely troublesome. There seem to be good theoretical grounds for this statement as much

of the halation is due to the reflection of oblique rays. Absolutely direct rays would be reflected along their own path and merely increase the actinic effect without affecting the purity of the image. Clearly, with a very small stop the obliquity of the incident rays is reduced to a minimum.

The Best Prints for Half-Tone Blocks

This is a matter that vitally concerns many workers who work for the press or otherwise expect to see their photographs reproduced. I have been personally under the impression that the average process worker likes his copy on smooth solio, but not squeegeed. The following letter from Harold Hood, a member of a well-known English firm, to the *British Journal of Photography* will be of value to many of us:

"GENTLEMEN: In the *British Journal of Photography* last week, under the heading "Ex Cathedra," you speak of self-toning paper as being admirable for reproduction purposes, and state that block-makers like it equally with P.O.P.

"What else you say, as to its convenient surface for working up and its facility of mounting, many others besides myself will perhaps readily endorse; but I doubt if you could get a couple of half-tone operators out of a hundred to say a good word for the average "self-toned" print. The chief defect which blocks from such prints show is an exaggerated darkness of all lower tones and shadows, although P.O.P. prints occasionally (when insufficiently toned) tend to show this ugly defect of muddy tones in the finished blocks, yet with the self-toning sort the defect follows almost as an inherent characteristic, and for subjects showing normal

vigor this kind of paper should be avoided when blocks are the end in view. (This very defect obviously makes S. T. paper useful when printing from flat negatives.) So greatly has the use of self-toning paper increased recently that, on behalf of my firm, I have found it necessary to issue special notices advising against its use when blocks are to be made.

"This failure of the half-tone block to reproduce fairly the details in brown or red inclined shadows is purely because of a want of orthochromatic sensitiveness in the collodion or emulsion most generally in use by half-tone block-makers. From the half-tone operator's point a scale of processes graduated in order of desirability might be fixed as follows:

"1st. Albumen or P.O.P. as near neutral black in tone as possible.

"2d. Platinotype or vigorous bromide.

"3d. Self-toning paper or reddish P.O.P.

"4th (and worst). Gum-bichromate and all rough surfaces of the fuzzy or very much forward art movement type.

"Many of our present day half-tone operators have a good grasp of the possibilities of modified screen distances and special stops, and to some of these nothing comes amiss, from glossy P.O.P. to gum and brown paper; yet, for the sake of commercial expedition, photographers should know the kind of print which will show as a block impression in that sleek and 'smooth finished way preferred by the majority. Only if not catering for this majority can the papers included in my No. 4 on the above list be ventured upon. Yours faithfully,

HAROLD HOOD."

The Control of Gradation in Bromide Prints and Lantern-Slides

In a past number of this journal I gave an account of the first application of this method, in which if I remember rightly a solution of potassium bichromate was the agent employed. The formula I am about to give was put forward by J. Sterry in a lecture to the South London Photographic Society, reported by the *English Amateur Photographer* of June 30th. The author commenced by saying that, "on the previous Tuesday at the Royal Photographic Society, a paper was read by Howard Farmer, and illustrations shown of a process of optically altering the method. His was an optical

method, Mr. Sterry's a chemical method. He had to confess that the results obtained by Howard Farmer were superior to the chemical method. Mr. Farmer used lined screens of various degrees of fineness of ruling, which were placed in front of the paper when enlarging at different distances, and by that means it was broken up into dots. The results were very fine indeed, and for commercial purposes bromide printing now would be simply perfect. The process was totally different from Mr. Sterry's, and he thought he could still claim that his would be the amateur's process for a good while to come."

The object to be attained is to get a soft print with a full range of gradation from a hard negative, so that one of the latter kind, suitable for platinum or carbon printing, could be equally used for a bromide enlargement. This, Mr. Sterry says, may always be done by the addition of a little chromic acid to the wash water, namely, one part in five thousand. The print is then to be slightly washed in plain water (though this is not a necessity) and developed as usual. Greater brilliancy could be attained by increasing the amount of chromic acid, but there was a limit to this—if more than one one thousandth were used degradation of the high lights ensued. It is to be noted that greater care in handling is needful with this method or stains may result. The lecturer also noted that one or two (English) papers did not respond to the treatment at all. Practically the effect of this treatment is also to convert a hard printing paper such as Carbon Velox into one of the soft types such as Soft Platinum Matte.

Photography With a Microscope

A paper entitled "The Helmholtz Theory of the Microscope," read recently before the Royal Microscopical Society by J. W. Gordon, says the *British Medical Journal*, deals for the most part with optical problems too abstruse to admit of being set forth intelligibly in a summary. But the outcome of the considerations therein advanced are matters of practical import to those who, without concerning themselves with the optical improvement of the instrument, wish to use the apparatus furnished to them intelligently and to the best purpose.

It was pointed out that, when using an objective of very wide angle or high numerical

aperture, by no means always, or even generally, are we getting the whole practical advantage we imagine; for the iris of the eye acts as a diaphragm, and, if an ocular of low power be employed, cuts off a material quantity of the outer part of the beam of parallel—or approximately parallel—rays, and so those entering the objective at the widest angles are wasted altogether. From this it follows that we may increase the power of the eyepiece without any apparent loss of light until we reach such a power that the beam it transmits is no larger than the aperture of the pupil.

If instead of viewing the aerial image we catch it on the finely ground glass the dispersion which takes place removes these shadows; but, on the other hand, introduces the texture of the ground glass. But if the ground glass, which may be a very finely ground cover slip, is made to oscillate, its texture disappears, and the field is cleared up. For visual purposes the oscillation, which is preferably motion in a circle or an oval, must be very rapid, but for photographic purposes it need only be slow, about ten oscillations a minute. In the apparatus shown it was worked electrically, but a clockwork motion would do as well.

The photographs exhibited showed great improvement by the intervention of this ground glass.

It was also pointed out that some of the optical difficulties which interfere with definition may be got rid of, or at least reduced to a minimum, by placing a screen perforated by only a small hole in front of the source of light. By this means the whole field will not be illuminated, but the definition will be improved; it can be so arranged that the spot of light may be made to travel over the different parts of the field.

Another interesting suggestion has relation to photography only. Instead of using a projection eyepiece, which involves a total length of apparatus often amounting to three feet or more, the image formed by the principal objective may be taken up by a second objective of lower power—an arrangement tantamount to using two microscopes in tandem. But if this be done, both objectives can be fitted into the same tube, which need only be some five inches longer than the usual body. Thus the whole thing is solid, and the difficulty of vibration, so troublesome in high-power photography, is done away

with; the author is sanguine enough to think that with such an apparatus photomicrography could be carried on on board ship.

Warm-Toned Lantern-Slides

H. W. Winter, in a paper to the *English Amateur Photographer*, gives an account of a series of experiments directed toward the attainment of warm tones by means of non-alkaline developers on chloride plates. Incidentally he relates that he experimented with an ordinary bromide of silver lantern-slide and by means of the under-mentioned developer. The exposure was 120 seconds one foot from an ordinary fish-tail burner consuming 6 feet an hour. The time of development was about ten minutes and the resulting slide "had a very rich brown color, showed great clearness in the high lights, and good range of tone":

Pyro	1 gr.
Sulphite, 10 per cent.....	1 oz.
Acetone	8 drops
Ammonium chloride	1 gr.

A Warning to Three-Color Workers

The following from the pen of Dr. Newhauss is a valuable warning to the beginner: "If a plate sensitized with cyanine, erythrosine, and glycin-red, and exposed to the prismatic spectrum, be developed, the deposit of silver from the red to the violet appears absolutely equal. From this the conclusion must be drawn that the plate possesses equal sensitiveness for all colors. This conclusion is false, for the plate has at least three times too great a blue and violet sensitiveness. The prismatic spectrogram thus gives rise to a fallacious conclusion of the worst kind. Would that these facts were more generally appreciated! The expert can naturally make a correct deduction of the color sensitiveness of the plate from the results obtained with the prismatic spectrum. When, however, as happens every day, spectrograms of this kind are published in journals destined for lay readers, there is again caused in wide circles quite false conclusions over the actual sensitiveness of the plates. To the plate-makers this may be agreeable, but 'the man in the street' has no advantage from it."

Notes and Comment

W. E. Dassonville will have an exhibit of his new Yosemite Valley prints in the bookstore of Paul Elder & Co., No. 238 Post Street, from October 15th to 31st.

W. J. Scandlin, 345 Sixth Avenue, Brooklyn, New York, is offering to the fraternity an effective business developer that is rapidly coming into favor. Made up of long experience in photography and advertising, mixed with an intimate knowledge of conditions and requirements, it will develop the details of any business if properly applied. A photographer deals in luxuries. So do lots of other men all around him. Lots of the other men make money. The photographer makes photographs. There is no reason why he should not also make money, but to do it he must adopt tactics similar to those that have made his neighbors prosperous. In other words, he must create new business through some well-chosen method of publicity. When in need of an assistant in your dark room, you hire him. You can do the same in your publicity department by addressing Mr. Scandlin.

The prize contest which was opened a few months ago by the California College of Photography, of Palo Alto, is creating a great deal of interest among the amateurs of this country. Every amateur should send to them for the circular "Win a Prize" which will give you complete information regarding the date, prizes and rules. The contest is open to all amateurs. The object of the college in giving this competition is to awaken the interest in view and interior work.

This college is meeting with the very best of success, their new building is completed and it is now the best equipped institution teaching photography in this country. Their advertisement will be found on another page; if you are interested in improving your photographic knowledge write to the college for the catalogue.

In accordance with a rule instituted some years ago, the C. P. Goerz Optical Works

in Berlin have again this year given a week's holiday to all the workmen of their factories in Berlin and Winterstein, Germany, as well as the employees in the New York branch factory. The workshops in Germany were closed from September 5th to September 12th, and in New York from August 20th to August 27th. Taking into consideration that the firm is working overtime, with day and night shifts, the value of this concession to their workmen, who receive full pay for the week of vacation, will be all the better appreciated.

The Cooper-Hewitt Mercury Vapor light about which we have heard so much from the East is now meeting with the same gratifying favor on the Coast. It is only recently that the local agents have been in a position to fill orders without the delay attending separate shipments from the factory. We have had several opportunities of seeing in operation those already installed here. Velox prints are made from ordinary negatives, using a sheet of ground glass in front of the light in order to bring the light under control, in one-half second. A platinum print requires about one and one-half minutes. Bromide enlargements require from two to five seconds where from fifteen to forty-five had been previously found necessary with an arc-light of extra high power. In portraiture, exposures ranging from one half to two seconds are found sufficient. Various forms of lamps are supplied; the illustration shown on one of our advertising pages being of the studio equipment. There will be daily exhibitions and demonstrations of the various uses of the several types at the Photographers' Convention, October 26, 27 and 28. Kirk, Geary & Co., Hirsch & Kaiser, California Camera Club, W. E. Dassonville and Oscar Maurer are at present using installations with the greatest satisfaction. In an early issue we hope to present a well-illustrated article explaining the working of the light in actual practice in the hands of one or more of these users.

The California College of Photography at Palo Alto, opened their fall term of instruction in the new college building on the 3d of October. The students who entered at that time formed the largest beginning class in the history of photographic colleges, due, to a great extent, to the fact that people are beginning to realize that in order to produce the best of work they must know *how*. The California College of Photography has been established to fill this great need and it certainly is doing so, if the instructors it has secured, the equipment with which it is fitted and the good report that comes to us from the demonstrators is any evidence.

We are informed that new classes will start on the first of every month, making it possible for students to enter at any time. It will pay you to write them for their handsome new catalogue if you wish to "be a photographer."

We have just received from Henry Wenzel, Jr., of the Wynne Meter Company, their revised speed card for use with their popular exposure meter. Mr. Wenzel makes it a point to keep all users of their instrument fully advised as to the speed of all new emulsions placed on the market as well as of any increase in speed in the older brands. We are pleased to note that the revised card gives the Premo Film Pack a higher rating than was done in some of the older lists. This, we are sure, is justified by the good quality of these goods. As a sign says in a local window filled with the Wynne Meters: "Stop guessing. Get a Wynne Meter and stop spoiling plates."

The Imperial Lantern Plates, so justly popular with the best workers across the water, bid fair to achieve the same measure of success in this country. They have the endorsement of some of our best workers. Users of slide plates should investigate their claims of superiority. G. Gennert of New York is the American agent.

Miss Clara Weisman is the latest addition to the staff of instructors at the California College of Photography at Palo Alto. She is a graduate of the leading New York and St. Louis Art Schools; was for three years instructor in retouching at the Illinois College of Photography, and has been located

with some of the most prominent photographers in this country, such as Strauss of St. Louis and Schumacher of Los Angeles. The *Photo-Mirror* of St. Louis says: Miss Weisman, by reason of her long experience as an instructor, is particularly well adapted to teach, and her writings on the various subjects and their subdivisions will be found both practical in the extreme and interesting. Miss Weisman's new book, "Artistic Retouching, Modeling, Etching," with chapters on Art, Composition, etc., is receiving favorable comment from the photographic press, not only in this country but also in Europe.

As we go to press the new catalogue of the Ocular Lens reaches our desk. This new power that is being placed in the hands of photographers by the Scientific Lens Company of 24 and 26 East Twenty-first Street, New York, should have the consideration of all photographers desiring to better their work; their portrait work in particular. Space will not permit of our giving details concerning the wonderful advantages made possible by this new construction but a request will bring a catalogue showing comparative work.

There is no piece of photographic apparatus which has remained longer unimproved than the Studio Camera, and the great possibility for improvement offered by imperfect adjustments on the present popular makes has induced the Century Camera Company to enter the field. With the Rochester Studio Outfit in the market professional photographers will no longer have to work at a disadvantage with antiquated apparatus. Space permits the mention of but a few of the distinctive features embodied: The focusing handle locks the camera automatically at any desired point, no clamp screw being necessary, as in other makes. More leverage is obtained, permitting large cameras to be focused with perfect ease. The Century Draw Knob is so fitted that one operation loosens, draws out and locks back of Camera. In other cameras it is necessary to loosen milled heads, then grasp the rear of camera in order to draw it out. With the new swing adjustment there is no cramping of parts in adjusting the swings, as the bearings are double pivoted. The device permits making a quick and accurate adjustment. There is absolutely no lost motion in the parts as in other cameras.

CAMERA CRAFTY



Price 10 Cents

San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY
114 GEARY STREET SAN FRANCISCO, CAL.



AFTER THE STORM
by HELEN P. GATCH

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

VOL. IX.

SAN FRANCISCO, CALIFORNIA, DECEMBER, 1904

No. 6A

Pictorial Quality in Negatives

By LOUIS FLECKENSTEIN

Within the past few years it has been my privilege to see a great deal of the work that is being done throughout the country by the present-day camera-worker, both good and bad—mostly bad—and the wonder is that so many will continue to do poor work while our magazines are constantly offering them good advice on the subject. Much of this work is bad only in the sense that it is entirely too mechanical, it is too intensely photographic, and tone values are a negative quantity. While it may be true that not all of us aspire to become pictorial photographers, yet the greater number of those who use the camera for pleasure or pastime can improve their work greatly in a very simple manner, and have something in after years that will please them far more than the usual type of photograph. By the “usual type” I mean the record-of-fact class, the kind that one picks up on his outings, little bits of nature that appeal to him at the time, or pictures of one’s home friends and companions. In point or composition much of this work is very good, but is uninteresting from lack of those delicate gradations that are so essential to a truthful rendition of the scene. The results are usually harsh and matter of fact.

A fair sample of the class of subjects that we meet with most frequently are herewith selected from my own stock of negatives to illustrate:

In the old man we have a type that we meet with everywhere, aged, decrepit, nervous, yet his picturesqueness appeals to us and we strive to get a snap-shot of him. The best way to take such characters is to snap them unawares, by engaging them in conversation or taking them while in the pursuit of their occupation; but if a pose is possible, do not overdo it. Make them feel at ease and watch your opportunity, then, when they least expect it, make the exposure. It usually happens that such a plate will be under-exposed, as it was in this case. Normal developer will give a harsh, contrasty and unprintable negative, with very dense high lights and clear glass shadows. We therefore dilute our normal developer with three or four times the quantity of water, which serves to keep the high lights in check while permitting the under-exposed portions to gain full density. Development proceeds slowly, but as soon as detail in the shadows is out, the plate should be rinsed and transferred to the hypo, for longer development only tends to increase the contrast. Naturally, the plate will be thin, but if rightly printed, will yield beautiful gradations and roundness of form, with none of those meaningless patches of black and white that are such an abomination to the artistic temperament.



PORTRAIT

they were under or again, recourse was developer, the image slowly and develop for half an hour. All is preserved, not with less, but in true relation to proportionate values. A slight sunning down of upper part of sky would add to pictorial effect. Another very ordinary and commonplace subject is the picture of a cornfield, showing that it is possible to get both clouds and foreground in the negative without the aid of ray filter or special plate. The camera was placed low and pointed in the direction of the sun, but a little to one side. Lens was used wide open and the exposure made to time fully the shadows cast by the shocks—about three seconds. The developer was diluted to about one fourth its normal strength and the plate allowed to develop until the sky portion had gained

In the picture of the angler we have an extreme type of a short exposure against a sheet of water and a clear sky in bright sunlight. Ordinarily, this combination results in very dense shadows, or dark masses where there is foliage, and white paper to represent sky and water. Perhaps fully one half of the pictures that came under my observation were bits of landscape with trees, water and sky, and the usual harshness prevailed and the values were totally destroyed because of faulty devel-

opment. It is but natural that this should be so when a normal developer is used for all kinds of exposures without regard as to whether over-timed. Here had to the dilute appearing very ment carried on the delicate detail microscopically sharp-

OLD SCHWARTZ
(Salon)

THE ANGLER



POOL IN THE WOODS—EVENING.
Chicago, Toronto and Royal (London) Saions. Medal, St. Louis Exposition
BY LOUIS FLECKENSTEIN

sufficient printing density, and by that time the detail in the lower portion also was well out. In the print herewith, the upper part of the sky was printed a little longer than the rest, to bring out better the cloud forms and to heighten the pictorial effect. A clear sky is often ruinous to an otherwise happy landscape arrangement and if one has not the time nor inclination to secure cloud negatives, sunning down can be resorted to with good effect and with little trouble. But if the clouds are there while the picture is being taken, do not be afraid you are going to lose them by exposing fully for the landscape; the dilute developer will preserve them for you.

A sky is not always essential to the success of a picture however, and if it prove bothersome may be dispensed with in many pleasing foreground arrangements. To obtain the most pleasing results the foremost objects should be sharply focused, a large stop used and plenty exposure given; then, using the dilute developer, our negative will be free from those sharp, cutting outlines and harsh contrasts. Instead, the full range of tonal gradations will be delicately preserved together with that other essential which we call atmosphere. One of my most successful efforts in this line is a simple arrangement of trees surrounding a pool of water, and was taken late in the afternoon, after sundown. It is sent with this article, but I fear the engravers will balk at it because it isn't the kind that reproduces well. It isn't even in the class that wins prizes, but it has the charm of quality that delights the eye of an artist, so I am told. In this, as in the other, the camera was placed low and focused sharply on the nearest objects, the lens being used wide open, and one-half minute exposure given. As a rule, on a subject of this kind, the light is not very strong and one is apt to under rather than over-expose. It is always better to err on the side of over-exposure, for development proceeds more quickly and the tendency to flatness corrects itself after carried beyond the point when detail is all out, the high lights continuing to gain density while the less affected parts have apparently reached their limit of development. An over-exposed or flat negative can also be treated by intensification to build up additional contrast, but the only salvation for an under-exposure is long immersion in dilute developer. In fact, several changes of a weak developer, at intervals of half an hour, will build up the merest ghost of an image to good printing density.

The difficulties of "at-home" portraiture can also be mastered by following this plan of long exposure and soft development. It is well to have the light from two windows to work by, preferably a north window for the principal light, and an east or west window to regulate the intensity of the other. The lower half of these should be curtained off with opaque material, also the upper half of the secondary window should be covered with some light, transparent fabric to soften and diffuse the illumination. The light from this window can be further regulated by lowering or raising the shade, depending upon the amount of light needed to round out and blend in with the stronger light from the north window. Then, from the top of your north window-frame a white sheet of cloth, four feet wide and ten or fifteen feet long, should be stretched out into the room on a downward slant to a point about eight feet from the window, then dropped to the floor. This acts as a reflector and relieves the intense shadow on the side of your model opposite the window, and the intensity of this shadow is still further relieved and modified by the light from the secondary window, controlled by the shade. This is about as crude an arrangement as I have ever come across,



BY LOUIS FLECKENSTEIN

BLEAK NOVEMBER

but it is the most satisfactory that I have been able to devise in the little ten by twelve room at my disposal, and the samples of portraiture herewith were taken under this lighting. It is still harsh and unsatisfactory, but with models who can keep still for five or ten seconds, very soft effects may be secured. As pictures taken by window lighting are nearly always under-exposed the dilute developer should be used and the high lights closely watched to guard against opacity. The plate should be rinsed and transferred to the hypo as soon as the high lights have the necessary printing density, for by that time the shadows and middle tones will have developed their proportionate range of values, and the result will be an easy and quick-printing negative.

Light and shade are capable of producing many results; but, the three principal are relief, harmony, and breadth. By the first the artist is enabled to give his works the distinctness and solidity of nature. The second is the result of a union and consent of one part with another; and the third, a general breadth, is the necessary attendant on extent and magnitude. A judicious management of these three properties is to be found in the best pictures of the Italian, Venetian, and Flemish schools, and ought to employ the most attentive examination of the student; for by giving too much relief, he will produce a dry, hard effect; by too much softness and blending of the parts, woolliness and insipidity; and in a desire to preserve a breadth of effect, he may produce flatness.

JOHN BURNET.



HOMeward

(Metropolitan Camera Club Members' Exhibition)

BY JOSEPH DAVIS



HUSH-A-BY BABY



CONFIDENCES
BY WM. S. RICE



GRANDMA'S PET

Outdoor Studies of Children

By WILLIAM S. RICE

"I have no luck," complained an amateur photographer recently to the writer, "in obtaining indoor photographs of my children, for the youngsters invariably move, and consequently ruin the negative; and snap-shot portraits taken out of doors are never satisfactory to me because I am compelled to take them in the sunlight, and then the children's faces are distorted by squints and wrinkles. I am only an amateur, yet I should like to obtain the best results possible, to treasure in after years."

Child photography is not so far beyond the average amateur if he loves children and makes child-nature a study, and observes a few rules. Watch a child at play and you will find plenty of opportunities for taking good pictures. Of course summer time affords better opportunities than winter, but with a flash-lamp even winter evenings abound with them. In photographing children one is in luck if he gets one good picture out of three or four exposures. Of course when the proper exposure has been obtained by experiment and the proper stop to use has also been ascertained the rest is easy if one adheres to the original method. I obtained a number of successful portraits last August, having had only two failures and those were caused by being light-struck, light having entered a faulty plate-holder.

If one has hit upon just the right time, exposure, stop and plate or film, the rest is not so difficult. Nevertheless, pictures of children require great patience in composing the picture, before the momentary period arrives when to press the bulb or the button. If there is a child in your home always have your plate-holders loaded. Have your camera where you can pick it up at any moment, for some of the most charming and fleeting of poses and expressions are often seen when, alas! your camera is either far away or your plate-holders are empty.

Patience is needed. For instance, when everything is "just lovely" and the bulb is ready to be squeezed your model will suddenly raise his or her hand to shoo away a fly or turn to stare right into the lens to see the shutter click. One little girl, who posed very well for me considering the fact that it was her first experience, would assume the most charming and natural poses without "being posed" by myself, had a habit of looking right into my face just when everything was ready for the exposure and asking me the oddest questions in the most serious manner, as: "What's the color of your eyes?" and "Are you going to give me a set of those pictures?" or "Who's your mamma?" and many others equally funny, which I replied to as good-naturedly as I could; then the child was satisfied and resumed her original position.



I find that when you can get a child interested in what you wish it to do, in fact more so than in what you are doing, it is comparatively easy to get an artistic and natural picture. You invariably spoil plates when you ask a child to "look pleasant." I believe that sometimes when a child can be photographed in a natural and graceful pose of its own, without its knowledge of the operator's presence, the results are more spontaneous than by any other method; but frequently it is imperative that the photographer should assist in the posing.

Sometimes when a child is much interested in what it is doing or in your conversation one can focus, set the stop, draw the slide and be ready to catch the fleeting expression just in time before the model lapses into listlessness. If the child is not well acquainted with you, court its friendship. A friend of mine was lately asked to take a picture of a three-year-old. The mother had tried many

professional photographers. In every instance the boy either wanted the operator to leave the room or had some other excuse for not posing. The boy seemed shy of my friend at first, but on being shown the camera (for plates) and allowing him to press the button—just make believe—by the time all was ready he was perfectly reconciled. How many professionals would ever have had the patience to do all this?

Having no recourse to a gallery, I made my studies of children outdoors. Whenever a natural background is preferred I pose the subjects in the yard among the flowers, where shrubbery or ivy-covered walls help to give artistic effects; but when simply a pose is wanted of a single subject I usually prefer a plain background, one that does not detract from the subject in any way. The simplest and most inexpensive background, as well as the most serviceable, I have found to be several yards of soft gray-brown, or for some subjects, cream-colored window shading. By tacking it on a roller one may roll it up when not using it; besides the roller prevents creases. Thumb-tacks will secure it to any board fence or wall of a building. I always choose the shady side of our house, which is the side facing the west, between the hours of eight and ten in the morning. There are no trees overhead to interfere with the lighting of the faces, and the light reflected from the sky is sufficiently diffused to overcome the objectionable habit of squinting. I have found the afternoon hours, using the north side of the house, answer quite as well. By using a quick plate, and stop 16, an exposure of from one half to one second was given. The development, however, was modified to take precautions in case the plate was over-exposed. I weakened the normal developer with a little water and added a few drops of bromide of potassium. If within a reasonable time the image failed to appear the developer was strengthened by adding a trifle more from the stock solution.

In conclusion, I would say that for amateurs who use hand cameras this method of making portraits will be found more satisfactory than "snapping" their models in glaring sunlight. The writer obtained some very satisfactory snap-shots recently by posing the models about 3 o'clock in the afternoon against the west side of an ivy-covered wall; an intervening house shaded the entire background but the luminous sky diffused or rather reflected sufficient light to obtain satisfactory results, without the distortion of features so common in pictures snapped in bright sunlight. Of course when taking snap-shots as described above, the largest stop is used.





TILLERS OF THE SOIL

(First Prize)

BY WM. H. ZERBE, JR.

The Members' Exhibition of the Metropolitan Camera Club

By JOSEPH DAVIS

Despite the fact that many of the promising workers in the Club allowed their modesty and their lack of familiarity with exhibition requirements to stand in the way of their being represented, this, our first exhibition, was a pronounced success. Having now had an opportunity of seeing what their more confident fellow members offered, future exhibitions will show a more varied collection from a larger number. Those represented are already at work on pictures for the coming Salon, greatly encouraged by the high praise which was accorded their work at this Exhibition. An "old-timer" in photography, and a man who has contributed much of his own work to various exhibitions, was heard to remark that the display which covered our walls was the finest collection of pictorial work he had ever seen put forth by a new club.

The print committee, assisted by Mrs. Jeanne E. Bennett of Baltimore, judged the pictures and awarded the three prizes as follows: First prize to William H. Zerbe, Jr., for genre, "Tillers of the Soil"; second, to Charles F. Mazdon for child portrait, "The Picture Book," and third, to William T. Knox for marine, "All Aboard." Mr. Zerbe displayed the largest number of frames, sustaining



THE PICTURE BOOK BY CHAS. F. MAZDON
(Second Prize)

throughout his reputation for the fine quality of his work. Mr. Mazdon's prize-winning picture was not equal to his usual work in carbon, a process in which he is a past master. A class in this work has been formed in the Club under the instruction of Mr. Mazdon, and if thorough knowledge on his part and enthusiasm on the part of both instructor and pupils are of any avail, great things can be expected at our coming exhibitions. Mr. Knox's picture "All Aboard" is a fine example of what can be produced with a small, cheap camera in the hands of one who knows how to use it to advantage. The original negative, Mr. Knox tells us, was made with a $3\frac{1}{4} \times 4\frac{1}{4}$ Film Pack Premo which he happened to have with him at the time. The result also shows what can be accomplished by enlarging

from small negatives that too often give a harsh print by contact.

With these few notes are reproduced some of the pictures shown. It was impossible to secure copies of many of the best pictures, but those obtained will give a good idea of the class of work exhibited. The wonderful success of this, our initial exhibition, has caused the print committee to decide upon the holding



RETURN TO THE FOLD

BY WM. H. ZERBE, JR.



ALL ABOARD BY WM. T. KNOX
(Third Prize)

photographic work and all that keen enthusiasm and unbounded enterprise on the part of those in charge can do will be done to make the Club a model of its kind.

The Metropolitan Camera Club is an incorporated body with a membership of nearly four hundred. Large and commodious rooms are occupied at 100 and 102 West One Hundred and First Street, New York. These new quarters occupy an area of over three thousand square feet, on one floor. The members have unrestricted use of dark rooms, enlarging apparatus, photographic library and the largest Cooper-Hewitt studio light in New York, permitting the making of portraits at any hour with one-fifth second exposure. All studio apparatus is of course a part of the equipment. The dues are merely nominal and the advantages manifold. Instruction in any process of the art is cheerfully given by experienced members. Visitors are cordially welcomed at all times. Curtis Bell, President, or S. C. Bullenkamp, Secretary, will be pleased to communicate with those residing in New York or vicinity, interested in photography and desirous of becoming members.

of a competition monthly. The next will be open to landscape, marine and still-life subjects; the second following will be a representative collection of work done under our Cooper-Hewitt studio light (which is at the free disposal of the members, and justly popular), and in December we will hold a competition for work in carbon only. Already some fifty of the members have prepared pictures for the second competition and with a few more to be heard from the number will double that of the contributors to the first.

These monthly exhibitions will be made a regular part of the Club's program. Other and equally interesting features will be introduced so that the continued interest of the entire membership will be maintained. Classes are to be formed covering every phase of pho-



THE PATH TO THE COTTAGE DOOR

BY WM. H. ZERBE, JR.

Exposition Photography as Seen by a Juror

By WALTER ZIMMERMAN

The deferred appointments arrived a couple of days before the time to start for St. Louis, requiring some excellent hustling to get personal and business matters in shape for the hasty trip from the Delaware to the Mississippi. Going in company with Curtis Bell, of New York, his personal good luck came to our aid in the way of a half-empty Pullman, while the rest of the train was crowded, running in three big sections for the Exposition. Arriving at St. Louis at night, the big terminal was filled with a mass of sweltering humanity, and its belongings. The great fair, several miles away, was distinctly in evidence from the start. Still covered with smoke and dust, our lungs filled with the fumes of the tunnel, there was a cordial and prominent personality to be met with at once in the well-known Julius Cæsar Strauss. Is the portraitist at home? Certainly, and in less time than it takes to tell, Mr. Strauss was out of bed and cordially smiling at us and shaking hands, with the protection of a suit of pajamas and a pair of slippers. After showing us through the most wonderful photographic studio in the world, he insisted upon taking us out to supper, the costume remaining the same, *plus* a pair of indispensables and a hat. This detail is mentioned to show just how independent one can be in St. Louis, and the fearlessness of our host as to conventionalities.

Three or four hours later the jury reported for duty in the director's office of the Liberal Arts Building. Colonel Ockerson himself constituted one of the long series of surprises which we met with at St. Louis. The *mental* picture of him was a big man with a voice which would command an army, a rough manner and a countenance that would quell a mob into obedience. In reality the Colonel is a man of slender build, fine features, prematurely white hair, quiet, deliberate and cold in manner. In appearance, he is a typical bank president, and not a colonel nor an exposition director. There is no doubt as to his force, earnestness and will power. After the first pleasant greetings, I wondered whether this could really be the man upon whom such a burden of responsibility for the failure in the photographic section had been laid, about which so much had been said and written. He is certainly at the opposite extreme from being incapable, and there is no doubt as to his good intentions. The very fact that he gave the photographic department personal attention, instead of deputing it to a well-known photographer, may account for the disappointment. While he had little knowledge of the various phases of photography or of photographic politics and was, in my opinion, misled by the secession leaders, it is a matter of record, and he would regard any discussion of the matter with disgust. While the facts must be stated plainly, it is with kind intent, and to propose the remedy for future expositions or exhibitions. The most vital change will be the division of photography into two totally different classes, one of them pictorial photography, and the other, photographic work and appliances. The future exhibition of pictorial photography must be included with and judged among the other works of art, paintings, drawings, modeling, engraving, etc. Photography, pure and simple, no matter how excellent in technique, must remain classified as in the present exposition.



Wm. A. Webster

From exhibit of
F. A. WEBSTER
OAKLAND
Second P. A. of C. Convention

When the photographic jury assembled, it was found to be truly cosmopolitan. The United States jurors were George M. Kurtz, Curtis Bell and Mr. Lazarnick of New York, Miss Frances Benjamin Johnston of Washington, D. C., F. Dundas Todd of Chicago, S. L. Stein of Milwaukee, and Walter Zimmerman of Philadelphia. The French jurors were Messieurs Lumiere, Gaumont and Boyer. The English delegates were J. Craig Annan of Glasgow, and General Waterhouse. The German juror was Baron Von Reden, while Señor Paulat represented Mexico. All spoke English except the three Messieurs, who required an interpreter. The party was a most interesting one, and, excepting any opinion as to the writer, a most thoroughly competent jury. It was quite as diverse in its opinions as to photography, although always in the friendliest manner possible, as in its nationalities. Mr. Bell is the President and organizer of the new American Federation of Photographic Societies; Mr. Kurtz is a brush artist and art critic; Mr. Lazarnick, a thorough American although of Russian birth, is a well-known illustrator for



THE JURY

Beginning at the left, names are as follows: Annan, Zimmerman, Bell, Stein, Paulat, Lumiere, Miss Johnston, Colonel Ockerson, Kurtz, Lazarnick, Gaumont, Von Reden, Todd and Boyer.

newspapers and magazines. Miss Johnston is a photographic artist and a traveler, and she would not mind having me say that she is a "jolly good fellow." Mr. Todd is a well-known photographic editor, with a strong Scotch dialect; Mr. Stein is an able and conscientious portraitist, on lines similar to that of Mr. Strauss. Mr. Annan is one of the most celebrated pictorialists of the world, and thoroughly unassuming. General Waterhouse is an expert in scientific and technical photography. Monsieur Lumiere is the head of a large firm of dry-plate makers in France and America. Monsieur Gaumont is a manufacturer of fine photographic appliances. Monsieur Boyer is a Parisian portraitist. Herr Von Reden is the German representative of other departments, as well as photography. Señor Paulat represents the Mexican government and is a member of the City of Mexico Photographic Society.

Now for the "order of business." In a word, it was one big tramp. Walking and standing in front of miles of photographs is far from being a pleasure, particularly with reference to those which came from countries unskilled in

photographic art and where a large number of them were quite mediocre. The system was an easy one. The whole party would stand in front of the exhibits as hung and any juror had the privilege of nominating any artist, or any one picture by him, for an award, stating the grade proposed. If seconded, the nomination was recorded; if otherwise, dropped from further consideration. Plenty of catalogues were distributed for the use of the jurors, but they were practically useless. The numbers were not in order, many exhibits were not catalogued, and many numbers were wrong. There were no names and no titles attached to the pictures, except with some of the foreign exhibits. In the United States section, identification was impossible. There is no indication that the exhibit is that of this country, and the two classes, pictorial and technical, were hopelessly mixed and the distinctive numbers confused. The splendid English exhibit had a perfect catalogue, as also the German collection, although in the German language. In the United States section a number of entries had been made subsequently to the examination by the Jury of Selection, including one "fierce" advertisement, prominently placed and masquerading as a pictorial photograph. The United States section suffered greatly in the placing and the hanging. The pictures were ranged along a small part of the west wall of the Liberal Arts Palace. Over the space allotted to the pictures, there were large windows, the light of which dazzled the eyes of the observer, while the photographs themselves remained in comparative darkness. The writer was made to feel too friendly toward the Exposition management to say one word of criticism except under necessity of stating the facts and with the hope that these and other objections will be guarded against at the next exposition, whenever and wherever that may be.

The work which the jury had to examine was not only distributed through all parts of the Liberal Arts Building but in buildings in all parts of the immense grounds of the Exposition. It will therefore be quite evident that there were several flies in the pleasant ointment of being an Exposition jurymen. The four countries which showed pictorial photographic work were, in order of excellence, as follows: Great Britain, the United States, France and Germany. It would be folly to state that the American exhibit was a bad one, for some of the work there is unexcelled. The number of exhibitors was very small, for the reason that the collection of photographs, pictorial as well as technical, was in charge of the Liberal Arts department who did not understand the work. The notices sent out were vague and indefinite and were not understood by photographers. Comparatively few therefore responded. It was near the closing date for entries when the writer, learning how matters stood, supplied a list of the exhibitors at previous salons, with which to address invitations to forward work. These notices were, nevertheless, not easily understood, containing specifications as to wall-space, diagram as to placing, drainage, electric power, lighting, and water power needed.

There were thirteen soft and beautiful genre studies by Mrs. Jeanne E. Bennett of New York, which gained a grand award; ten pictures by Rudolf Eickemeyer, Jr., of New York, principally landscapes, which obtained a gold medal; four portraits by Elias Goldensky of Philadelphia, which also received a gold medal; six artistic and delicate gum-bichromates by Adolph Petzold of Philadelphia, which received a silver medal; four studies by Louis Fleckenstein of Faribault, Minnesota, one of which was awarded a silver medal; four miniatures in genre by the Misses Parrish of St. Louis, one of which received a silver medal; and two



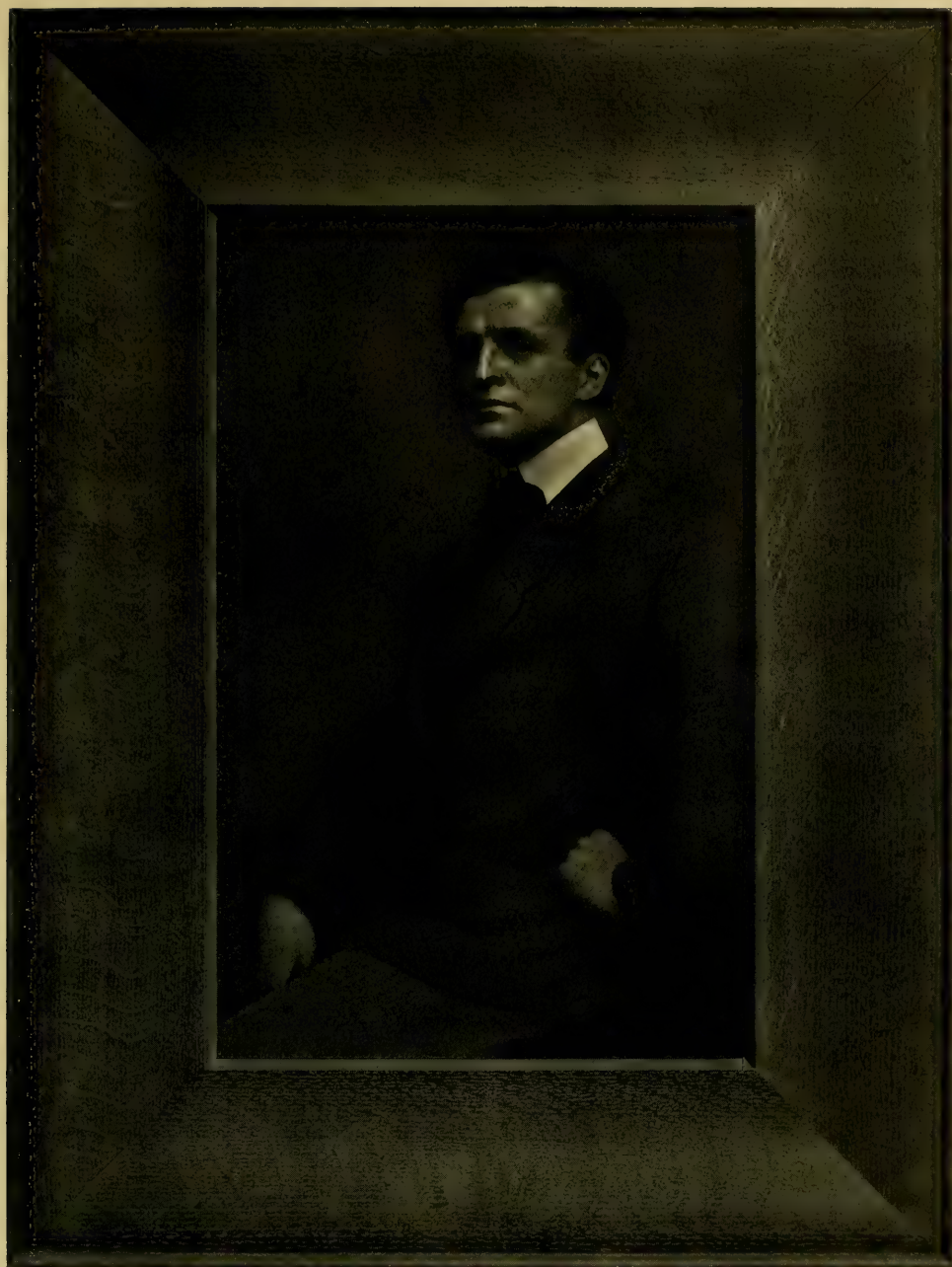
From exhibit of
VAUGHAN & KEITH
Second P. A. of C. Convention

large genres by the writer, which, of course, were *hors de concours*, but obtained a special resolution of appreciation, during his absence. All of these were shown by members of the Salon Club of America, which, with sufficient preparation, would have exhibited a much larger number. Fine work was also shown by Julius C. Strauss of St. Louis, winning grand award for portraiture; Knaffl & Bro. of Knoxville, Tennessee, a gold medal for one picture; H. A. Latimer of Boston, Pirie McDonald of New York, silver medal for portraiture; Mrs. Pocahontas Jacquemin of Kansas City, bronze medal; J. E. Giffin of Wheeling, West Virginia; George J. Parrott of Fort Wayne, Indiana; A. T. Proctor of Huntington, West Virginia; Edgar L. Bowman of San Francisco, W. N. Brenner of Cincinnati, Ohio; Helen W. Cooke, silver medal; Homeier & Clark, Richmond, Virginia, bronze medal, William Notman and E. F. Hearn. There are probably not catalogued, others which should be included in this list. A proper collecting of the representative American work by a competent photographer, with judicious hanging and placing, should have made the United States exhibit one of the chief attractions of the Liberal Arts Palace.

In describing the exhibit of Great Britain, there is just one word which tells the story, and that is—magnificent. Our English brethren did their own collecting, selecting and hanging. The pictorial section included fine examples of the work of J. Craig Annan, Reginald Craigie, A. Horsley Hinton, Charles Job, Alexander Keighley, Charles Moss, the late H. P. Robinson, and many other fine pictorialists. In the whole section there were but three or four exhibits which were lightly regarded by the jury. So many of the pictures were in large sizes—about two by three feet—that the whole exhibit had the appearance of being composed of large work. Nearly all of it was in sepia or brown, mostly carbon, and there were scarcely any gum-bichromates. There is no doubt in my mind that pictorial work when well executed appears to far better advantage when shown in large sizes. Each of these English artists has his own style, or individuality, easily recognized. It was a difficult matter to keep within proper bounds in awarding prizes in this section. The official catalogue contains merely a list of names, and no list of the pictures shown. The scientific photographs of the British section were fine in technique, and of such great scientific interest as to require many hours to examining properly. There was also the great collection of historical photographs of Sir Benjamin Stone, occupying a pavilion, but not mentioned in the catalogue. The English pictures were hung on the same wall with the American work, but plenty of space was given to them and the alcoves were several times as wide.

The German section was pavilioned in the central portion of the Liberal Arts Building, with no objection as to lighting, and the fine pictures were hung to excellent advantage. The quality of the work was very high, but this quality was rather more technical than imaginative or pictorial. These German pictures were principally portraits, and of these, many were in life sizes. The greater number of the German pictures, landscapes, as well as portraits, were from large plates. There were scarcely any genre studies in this section.

The French section was also properly placed and fairly lighted. The principal exhibit was a collective one from the members of the Photo Club de Paris, principally Demachy, Puyo, Bourgeois, Binder-Mestro, Bucquet, and Stoiber. This exhibit was composed of small pictures exclusively, very fine, perfect and



From exhibit of
A. T. PROCTOR
HUNTINGTON, WEST VIRGINIA
Second P. A. of C. Convention

beautiful; delicate gum-bichromates predominating. This collection was entered as a whole, not for the individual names; and of course received a grand award.

After these four countries, there were many exhibits of photography, pure and simple, without pretense as to pictorial effect, and they were scattered through so many parts of the big Exposition grounds that it seemed like going on a rather tiresome excursion to tramp from one to the other. One interesting feature was the absolute indifference of some of those in charge of the exhibits, and the intense eagerness of others, to obtain prizes for their constituents. In one case, strenuous objection was made to the recognition awarded, and the writer was told that, if a reconsideration could be obtained, it would not be at all a question as to price. It was only an act of kindness to those whom he represented that the man was told that if he said another word like that, there would be no award whatever. The Japanese exhibit was thoroughly national in style, but their chief attraction was the delicate hand-coloring in which the Japanese are expert. The Italian exhibit in the Liberal Arts Palace, contained some very perfect large photographs of Venice, Florence, etc., and some excellent copies of statuary and bas reliefs. The Swiss exhibit consisted in one immense enlargement of a snow mountain view, which, on account of its great length, was "skied" so high as to be observed by accident, and awarded the gold medal for that kind of work, which it fully deserved. We tramped in a tired body over to the Swiss chalet, to see what Switzerland had to offer, and were told by the short-skirted Swiss maidens in charge, that the one big photograph in the Liberal Arts Building was "already all."

According to the plan adopted by the jury, the whole of the work was first examined for the nominations already referred to. After the nominating was completed, the party went over all of the ground a second time, and a vote was taken in regard to every nomination that had been seconded and recorded. This was done by balloting, and an enterprising member managed to secure a pasteboard box and some black and white beans, an outfit which answered the purpose quite as well as a much more elaborate one. It was during the process of "dropping the beans" that the greatest entertainment was afforded to the rural visitors at the Fair.

The pleasantest feature of all was the large cordiality and hospitality of the St. Louisans, officials and people. Not a day passed without one or more invitations to fagged jurors to attend banquets and receptions in the evening. The most enjoyable was a banquet given in the name of Colonel Ockerson to the jury on photography and the jury on arts. All of the principal officers of the Exposition were present and made interesting speeches, giving us an excellent opportunity to feel that we were acquainted with the organizers of the great Exposition. They were hearty in their manner, and impressed us as wishing to become personally acquainted with every man and woman present. Yes, Miss Johnston went, after some little hesitation, and was made to feel heartily glad that she had done so. The speakers would sometimes say: "Lady and Gentlemen;" and, when called upon for a little speech, Miss Johnston responded in the brightest and most entertaining manner. Another enjoyable entertainment was given by Mr. Strauss in his rathskeller, in the basement of his studio, which he designates as the "growlery." The two juries were invited to that also, and the place was decorated with a flag of welcome and a "stein" named for every guest.

The World's Fair Convention of the Photographers' Association of America

On Tuesday, October 4th, 1904, at half past nine o'clock A. M., the Twenty-fourth Annual Convention of the Photographers' Association of America was called to order at the Forest Park University Hotel, St. Louis, Missouri, by the President, C. R. Reeves.

When Mr. Reeves ascended the platform to call the Convention to order he was loudly applauded. He said: "We expected an address from the Mayor of the City this morning, but he has been detained, and Professor Griffith has been requested to welcome you in his stead. You all know Professor Griffith, you all love him, and I know you will be pleased to hear him."

At the close of Professor Griffith's address of welcome the reading of communications was taken up. This in turn gave place to an address by President C. R. Reeves.

In closing he said: "We have next on the program a talk from one whom you all know by reputation if not personally. A grand old man who has stood at the top of the line for many years, a grand old man who was for several years President of the original Photographers' Association which was called the N. P. A. A man who is eighty-two years old, yet is a boy. I take great pleasure in presenting to you Abraham Bogardus of New York City." Mr. Bogardus spoke most interestingly and at some length, covering the wonderful advancement made in photography since 1840 when he read in the papers of the discovery of Daguerre.

Following Mr. Bogardus the President introduced Mr. Cramer with a few well chosen words. The speaker finished amid a round of applause and then Professor Griffith was introduced.

During his talk he said: "Now if you go over into this picture gallery you will find pictures by Sargent, by Chase, and then go into the main collection and look at the Rembrandts, but don't do as a woman did a couple of weeks ago. She went to a guard and asked: 'Would you tell me who painted that Rembrandt?' And he replied: 'Madam, that is original.' 'Oh, yes, I know, but you know,' she said, 'that when you talk of books you like to tell who the author is, and I would like to know who the painter was.' What are you going to do with people like that? You can't do very much of anything. Now you go over there and look at the Rembrandt and study it and study the portraits by those old English masters who realize that white and black are never white and black except under certain designations, under certain circumstances. Those men realized that they never could paint white, that they never could paint black, and the result of it was that they kept everything down in a low tone like some of the best photographers of today. A few years ago you wanted all the faces white. Even the colored people wanted their faces taken white. Now you don't do that any more. You take them once and then cover the whole of it with the retouching pencil and retouch the black all out. You want to keep the character distinct, and that is what you want in a picture. In a photograph you only feel that you are taking flesh; that you are impressing the people with the material that is before the camera. Over there is a picture that I want to call your attention to

particularly, by Sargent, of Chase, and then there is another there of three sisters; but this picture of Chase—look at that and see the character there is in it. It is painted, *not* taken instantaneously like you take a photograph, but is painted from life. And the man, if you could know Chase, if you could know the character of the man, you would say that it is exactly like him. He has his palette in one hand, has gathered up the brush and drawn it back as though it was before the school; and say, now I will show you how to do this thing: simply keep everything subdued, keep everything down to a certain effect until he wants crispness not weakness and the spirits that abound in his face show that there is the picture. You realize that the palette and the brush are only part of the man but that is every part of the man, that is the character, the very best kind.

“Never give a man or a woman a price on anything until they ask you. If they are not interested enough to ask you the cost don’t give it to them. Try and get the picture taken without ever saying a word about money. Now then a man comes into the gallery and he expects to pay you five dollars a dozen and you charge him ten. There is a look of disappointment in his face that never goes out even when you get him before the camera and he is not satisfied with the picture because of that look of disappointment. You are swindling him out of five dollars he feels, and shows it in his face. The camera will not lie. It takes all before it, but you can lie yourself a little bit. You should know how to manipulate the camera and the plate and also to manipulate the man when he comes in. Try to find out what his fad is. If it is horse-racing you want to know everything about horse-racing that there is in it, and talk horse-racing to the man until the first thing you know he is clapping you on the shoulder; now you are on equal terms and you understand one another, and he goes at you with a horse-racing face on him and he is going to win, and he will sink every dollar he has got if you win and he will do it like a soldier. Know first the kind of a man; the man will meet you on your own ground. If he is of religious character,—well, be as religious as you can. (Laughter.) Try and meet him on his own ground but get him out of this long religious face, brighten him up, make him feel that life is worth living, that this is not such a poor, sinful world after all, that there is a great deal of joy and pleasure and beauty in it, and get him to see something of it and then take his face, and make it just a little bit better than other men, and you will get his money. Make love to the women’s children. I tell you that if you don’t take up with the children you will never reach the mother’s heart. (Cries of ‘Amen.’) And it is the way to take pictures. Ask Core. Core will tell you it will pay you. There is not a child comes into his studio that he does not win. If the mother is with it, he makes up to the mother first, and lets her understand that it is the brightest, most charming, most beautiful boy that ever came into his studio. You need not lie about it, you can give that impression. And you will please her.”

The President announced that the exercise by F. M. Steadman would be given on Thursday instead of Friday, and that the election of officers would take place on Friday as the Constitution of the Association provides that the election of officers shall take place the morning preceding the last day of the Convention. The Resolutions Committee was then appointed as follows: Alfred Holden, S. M. Holdman and George M. Edmondson. The Nominating Committee: R. P. Bell-smith, Frank Medlar, John S. Schneider and R. A. Spafford and Clarence Smith.

M. M. Cole was introduced and gave a most interesting talk followed by Mr. Duehrkoop of Germany, a gentleman whose exhibit of photographs is one of the finest in the Liberal Arts Building. His address was followed by adjournment for the day.

Wednesday was Manufacturers' and Dealers' Day and the crowd was just as large and enthusiastic as on the first day.

Thursday, October 6, 1904, the Convention was called to order at nine o'clock A. M. by President Reeves who next introduced Henry Erle Cooper of Southampton, England. Mr. Cooper compared the Convention with those held in his own country, expressing his gratification by saying that ours exceeded his expectations.

Business matters then occupied the Convention. Boston being selected as the meeting-place of the next Convention. Mr. Collinge and Mr. Parkinson spoke followed by Professor Bement who gave a most interesting talk on "Art in Photography." The day's session closed with one of the most interesting features of the Convention; a thorough explanation of the "Principles of Lighting and Scientific Development," by Frank Morris Steadman.

Friday, October 7, 1904, the Convention was called to order by the President at half past nine o'clock A. M. The Committee on Resolutions reporting:

Be it Resolved, That the President of this Association do appoint three Trustees, who will take charge of the sum of \$2,000 of our present funds, and safely invest, for the future welfare of our Association, and

Be it Further Resolved, That the President shall appoint a Committee on Constitution and By-Laws who shall frame laws for the future government of this Association under its proposed reincorporation.

Be it Further Resolved, That the said Trustees shall arrange for permanent quarters for preserving the records and property of this Association.

Be it Also Further Resolved, That the sum of \$500, which was voted at the last Convention to be given toward the Daguerre Memorial Institute upon a receipt of a favorable report of the committee appointed to investigate the question of the advisability of the permanent repository for the Association, shall be given into the hands of the Trustees for the purpose designed, which sum is to be independent of the \$2,000 above mentioned.

Be it Further Resolved, That the President's recommendation that some recognition for excellence attained for work exhibited at our next Convention, be referred to the incoming board of officers for consideration.

Be it Further Resolved, That the *Association Review* shall become a permanent fixture.

And be it Finally Resolved, That the thanks of this Association are due to the manufacturers and dealers for their cordial support and assistance in making this Convention a success.

The report was accepted.

Mr. Lively, as chairman of a committee appointed by the State Associations, read the following resolutions:

First, Resolved, That we, the National Association, co-operate with and foster a closer union of all state associations with each other and the National, by receiving and hanging pictures sent to this Association from members of state associations, attaining the degree of excellence prescribed by the Executive Board of the National, and that this resolution shall not be construed to mean that

the National debarb exhibits from members of the National who do not hold membership in state associations.

Second, Resolved, That we request the abolishment of the prize system of conducting conventions that is still in favor with a number of state associations, and that they adopt in lieu thereof, the certificate plan together with a badge of merit and recognition, suitably engraved, to be awarded to all who reach a degree of excellence determined upon by the Executive Board of the National Association, and which will entitle the owner to a certain standing in the National Association.

Third, Resolved, That we, as a corporate body (having the power to do so), create a degree in photographic art which shall correspond to that of National Academy of Artists, and confer the same upon all who attain the degree of excellence prescribed by the National Executive Board, which shall also carry with it the privilege to affix suitable letters to the name of the honoree appropriate to this degree.

We further recommend, that the National appoint a committee whose duty shall be to divide the United States into districts, and that the National shall hold its conventions in the several districts alternately, beginning at Boston next year, in order to promote the growth of the National, and the best interests of the profession. We further recommend that the National supply the various state associations with the badges of merit in order that they will be uniform and also become badges of recognition.

The report was referred to the incoming board for action.

The committee appointed to draft resolutions regarding the death of members reported next. Report accepted. The committee appointed for that purpose reported most favorably on their investigation of the Steadman method of measuring light and speed marking of plates. Also accepted. Next on the program followed a criticism of the pictures by Professor Bement and a talk on "Color Photography" by W. G. South.

The Nominating Committee reported, and after further nominations were heard, the voting for President was at once proceeded with. Tellers were appointed to collect the ballots while Professor Griffith entertained the members. George G. Holloway, having received a majority, was declared elected.

THE PRESIDENT: The next is the election of a First Vice-president. We have the regular nominee, C. J. Van Devanter.

Mr. Smiley moved that the nomination be closed and that the Secretary be instructed to cast the entire vote of the Convention for Mr. Van Devanter. Mr. Teuber seconded the motion. The motion was carried.

The Secretary cast the vote of the Convention for C. J. Van Devanter for First Vice-president.

MR. VAN DEVANTER: Mr. President and my friends, I thank you for the compliment. I say that with deep feeling, because I feel that it is an endorsement of my efforts in the past on the Executive Board. While I have only played second fiddle I leave it to your judgment as to how I can play First Vice-president. I thank you kindly.

THE PRESIDENT: We will pass to the selection of Second Vice-president. A. T. Proctor of West Virginia is the nominee.

Mr. Holiday moved that the nominations be closed, and Mr. Teuber seconded the motion. The motion carried.

Mr. Barrows moved that the Secretary cast the entire vote of the Convention for Mr. Proctor. Mr. Teuber seconded the motion and it carried.

The Secretary cast the entire vote for A. T. Proctor for Second Vice-president.

THE PRESIDENT: Now the next is the election of Secretary. M. B. Parkinson of Boston, Massachusetts, is the nominee.

MR. PARKINSON: To make it regular, I believe what I said before will not be recognized, but all heard what I have to say. It is not necessary for me to say any more than that I am sincere in declining to stand for this nomination.

MR. MEDLAR: I take great pleasure in placing in nomination J. M. Bandtel of Wisconsin as Secretary. Nominations closed. Moved that the Secretary cast the entire vote of the Convention for Mr. Bandtel. Seconded and carried.

The election of officers resulted as follows: George G. Holloway, President; C. J. Van Devanter, First Vice-president; A. T. Proctor, Second Vice-president; J. M. Bandtel, Secretary. This being completed, next in order was the presentation of life-memberships to the Past Presidents of the Convention. Professor Griffith making the presentations as follows: John Carbutt, Joshua Smith, J. E. Beebe, J. H. Kent, James Landy, W. H. Potter, G. Cramer, E. Decker, H. McMichaels, George H. Hastings, W. G. Entrekin, Frank A. Place, Adam Heimberger, John S. Schneider, R. P. Bellsmith, C. M. Hayes, J. Will Kelmer, F. W. Guerin, S. L. Stein, E. B. Core, George M. Edmondson, and J. George Nussbaumer.

Mr. Milton Waide of New York City spoke most entertainingly, describing the one-man method which he so successfully practices.

After a few well-chosen words by President Reeves, and a vote of thanks to the Executive Board, the meeting adjourned sine die.

The Quarter-Centennial Convention of the P. A. of A.

Boston has been chosen as the next meeting-place of the Photographers' Association of America, and as the Association will be twenty-five years old at that time, the convention will be known as the Quarter-Centennial Convention of the Photographers' Association of America. It will be the grandest and best convention ever held in the history of the Association, and you should begin making your plans to be there.

The New England Association has decided to postpone their annual convention and use all their efforts to make this Quarter-Centennial Convention the grandest that photographic history has ever known. The Executive Board of the Photographers' Association of America will endeavor so to arrange matters, that every one making work reaching a certain grade will receive a badge of excellence, or some such recognition.

Begin now to arrange for your exhibit, as I desire to see this Convention made the best in the history of our Association.

Fraternally yours,

C. J. VAN DEVENTER.



From exhibit of
O. H. BOYÉ
Second P. A. of C. Convention

Second Annual Convention of the Photographers' Association of California

This, the second Convention held by the Photographers' Association of California was even more of a success than the most sanguine could have predicted. Vim and go characterized the proceedings from the opening speech of President Boyé to the close of the grand ball which proved such an enjoyable and fitting finale. The highest interest was maintained throughout the entire three days. On this score there could be no comparison and on the matter of attendance the verdict of those in a position to judge was that only the National, and perhaps the New England Convention, could claim a greater showing. The hearty co-operation and enthusiasm displayed by the local members could not have resulted otherwise than in a most successful convention, but when it was found how well represented were the northern, southern and interior portions of the State, the cause for surprise was augmented. A crowd was always in attendance. The

demonstrators had difficulty in finding an opportunity to enjoy a brief repast, often delegating their desks to some member willing to answer questions during their absence. The capacity of President Boyé's large studio was tested to the limit. Even the large grand stand structure erected for the occasion failed to do little more than furnish seats for the lady members present during the demonstrations given under the light. Several of the manufacturers' agents were compelled to repeat their demonstrations for the benefit of those who could not get within reasonable distance on the first occasion.

The large wall space of the Art Hall of the Mechanics' Pavilion was well filled with exhibits most tastefully arranged. The interstate exhibition, the foreign exhibit and the loan collection from the Photographers' Association of the Pacific Northwest were at all times subjects of deep study and interest. These occupied the upper end of the hall which was devoted to the lectures, concerts and other features in their turn. The dealers and manufacturers represented at the Convention were as follows:



BY TABER

Second P. A. of C. Convention



From the exhibit of
E. L. CURTIS
SEATTLE
Second P. A. of C. Convention

Stuparich Mfg. Co., Kirk, Geary & Co., Hirsch & Kaiser, Max L. Shirpser, Gallagher Bros., American Aristotype Co., Eastman Kodak Co., Anthony & Scovill Co., Cooper-Hewitt Electric Co., H. J. Shillcock, G. Cramer Dry Plate Co., M. A. Seed Dry Plate Co., Scientific Lens Co., Defender Paper Co., California College of Photography, and CAMERA CRAFT.

The several demonstrations of the possibilities of the Cooper-Hewitt light in portraiture and of the Aristo Violet Ray Lamp in printing were of the greatest interest. The display and demonstrations of the Ocular and other lenses made by the Scientific Lens Company created much interest and were at all times the center of a large group. Being entirely new to a majority of the members, these three exhibits proved the star attractions among those furnished by the dealers and manufacturers, although all were well pleased with the attention which rewarded their efforts. Lectures, demonstrations and talks maintained the constant interest of those in attendance. To quote from the handsome Souvenir Program which was issued by the Committee in charge:

"The program for the three days is strictly educational, and the greatest care has been exercised in its arrangement, so that each feature may be an important one. All the latest methods and most practical devices which have been added to the art of photography during the past twelve months, will be shown and demonstrated."

Wednesday, October 26th.

The hall was thrown open at 9 A. M. with every exhibit in position. After a short time devoted to the inspection of the pictures and the usual introductions and greeting which kept the Reception Committee busy, an address of welcome was delivered by President Boyé. The happy nature of his remarks but added to the general good feeling. Following immediately was the scheduled "Art Lecture and Criticism of Pictures" by Professor John M. Gamble, whose efforts in the same direction were so highly appreciated at the last Convention. Mr. Gamble took his hearers around that portion of the walls containing the foreign exhibits, holding their attention as only one whose words are valued could. The time at his disposal passed all too soon for his hearers. After assuring the members of his regret that he could not be with them longer, the Secretary tendered him the thanks of the Association which was supplemented by personal words of appreciation from many of the members.

At 1 P. M. a demonstration was given of Defender papers followed by a talk and demonstration on plain salted paper by Professor O. V. Lange. This was given in the assembly room of the hall and



BY GEO. H. KNIGHT

Second P. A. of C. Convention

elicited much interest from one of the largest audiences gathered during the Convention, due no doubt to the fine examples of landscape work shown by Mr. Lange in his exhibit in the Art Hall, one of his pictures, winning later, first prize in the landscape class.

At the close of Mr. Lange's talk, during which he handed around many examples of his work on various shades and textures of paper and cardboard, the members adjourned to the studio of O. H. Boyé, where demonstrations on lighting and posing were made to occupy the afternoon. Mr. Boyé showed and explained the use of his concealed camera employed in child portraiture as well as the room set aside as his "baby studio." He also demonstrated his use of white backgrounds and other features and methods which he so successfully employs. The attendance overflowed into the reception rooms despite the large size of the studio, but the structure of tiered seats, which had been erected for the purpose, enabled all to



BY R. P. WHIGHAM

Second P. A. of C. Convention

follow the various demonstrations throughout. The evening was devoted to the public exhibition and promenade concert. The attendance being so large and the regrets so freely expressed that others could not be advised and allowed to share the pleasure, it was decided to confine the demonstrations to the outer hall and allow the public again to visit the exhibition on the following evening.

Thursday, October 27th.

The morning was taken up with a demonstration of American Aristo and Aristo-Platino papers which were printed by the new Aristo Printing Lamp. Frank H. Doyle, who had just come from the New England and the Northwest Conventions, where he had been most enthusiastically received, was but partially prepared for the interest displayed by the California photographers. A serious cold and the orders of his physician prevented the appearance of Professor Latimer, of the Art Institute, who was to have lectured at 11 A. M. While deep regrets were felt at the disappointment, and sympathy expressed by many of the members who know Mr. Latimer, the time was not allowed to drag for an instant. In fact, the demonstrations of the various dealers and manufacturers being in many cases so new and attractive that a large number neglected to note the arrival of the luncheon hour, somewhat to the chagrin of the demonstrators themselves. For the same reason it was decided to postpone the "Talk on Business Methods" for



BY KELLMER, HAZLETON, PA.

Second P. A. of C. Convention

which L. D. Hicks was scheduled. A repetition of the previous evening's pleasure was afforded to a large attendance of the public who had secured invitations, while at the same time the members were entertained in the outer hall with demonstrations. The Cooper-Hewitt Mercury Vapor Lamp was thoroughly explained and several negatives made, demonstrating fully the wonderful power of the light, Will Lussier acting as demonstrator. Messrs. Lovick and Burleigh, of the Eastman Kodak Co., gave a most interesting demonstration of the possibilities of bromide papers and showed how extremely simple was the matter of producing the finest of results.

Friday, October, 28th.

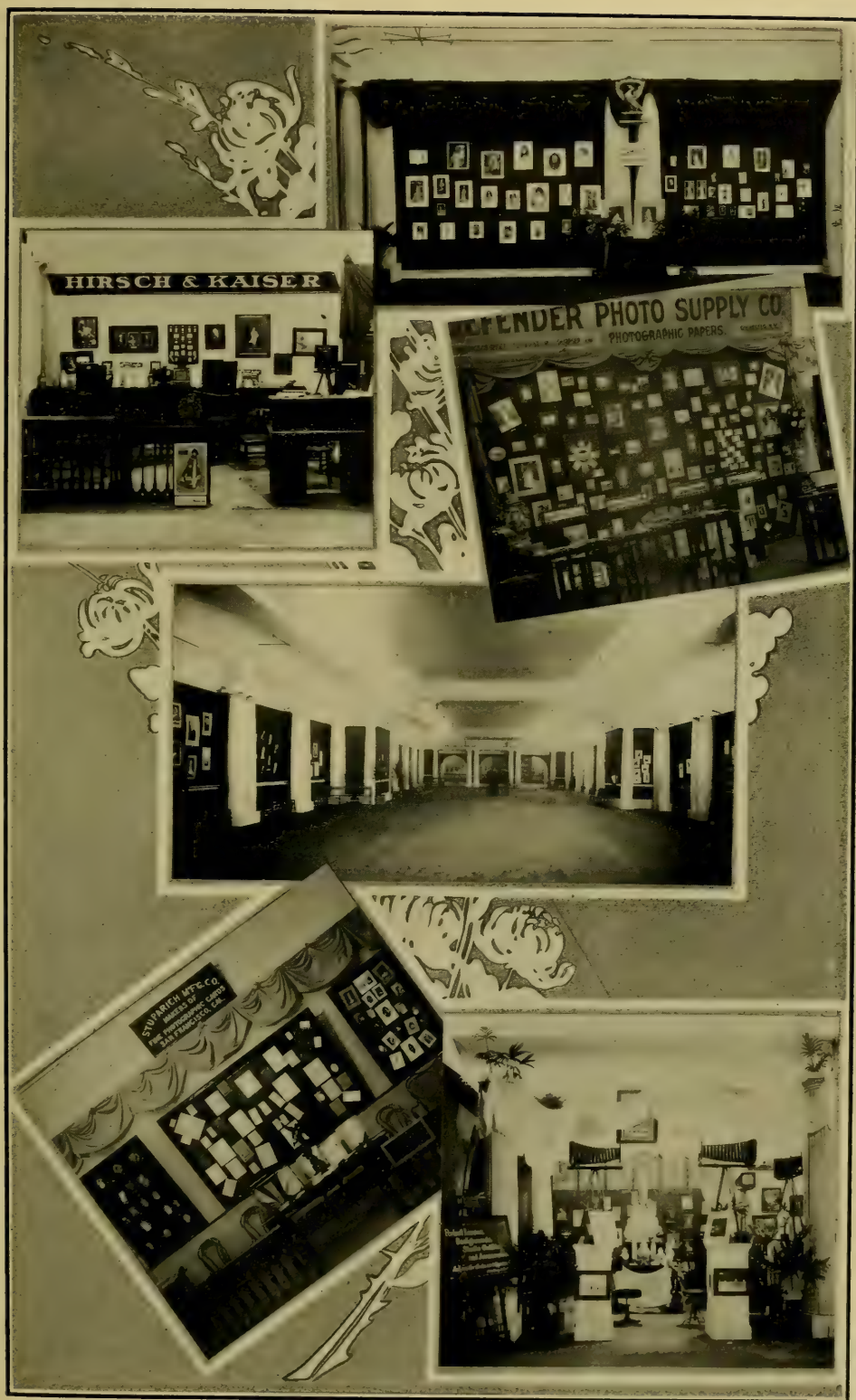
As announced in the program all the studios were closed for the day and this greatly augmented the attendance which assembled at the studio of President Boyé at 9 A. M. Here were given demonstrations by a number of the leading operators of the Association on their methods of working under the skylight. Several different forms of screens had been sent to the studio by their respective users who explained their advantages as employed in their work. Among those who explained their methods of securing various results were: George L. Wilcox, Lawrence F. Terkelson, O. H. Boyé, Will Lussier and F. A. Webster. The entire morning was taken up in this most instructive work which was voted the best feature of the Convention, particularly by the out-of-town members.

The early part of the afternoon was most entertainingly filled with a demonstration on platinum printing by George Peters, and one on carbon printing by T. H. Wilton. This last was confined somewhat to the application of the process in the securing of portraits on watch-cases and the like, and for this reason proved most interesting to the members. The business session followed. Routine business being disposed of, the matter of the next Convention came up. The invitation of the Photographers' Association of the Northwest to combine with them at Portland next year was unanimously accepted with the understanding that that Association would second the efforts of the California Association to secure the National Convention for San Francisco the following year. The jury appointed to award the



BY DUDLEY HOYT, ROCHESTER, N. Y.
Second P. A. of C. Convention

bronze trophy for the best foreign exhibit was composed as follows: Fayette J. Clute, Chairman; George L. Wilcox and F. A. Webster. They reported as making the award to E. S. Curtis of Seattle. An intermission was given to allow time for voting on the best picture by a member of the Association, in both portrait and landscape. The vote resulted in the selection of a portrait by O. H. Boyé and a landscape by O. V. Lange. The former is reproduced on another page but the latter being printed on plain salted emulsion, coated on paper of a blue tint, could not be reproduced. During the process of the election a strong effort was made to induce D. F. Mullender to accept the nomination of president and again a re-election as secretary, but without avail. He was finally allowed to decline both offices on the understanding that he would permit his name to come before the Convention in 1905. The result of the election was as follows: Louis Thors, President; T. H. Wilton, Vice-president; Jacob Fowzer, Secretary, and J. F. Mullender, Treasurer.



THE ART HALL AND SOME OF THE MANUFACTURERS' EXHIBITS



A FLASHLIGHT TAKEN DURING THE GRAND BALL

In recognition of the hearty support given the Association by the photographers throughout the State, it had been determined to elect three additional Vice-presidents, which was accordingly done with the following results. For Northern California, W. J. Hogan; Central, W. B. Franklin, and Southern, George R. Butler.

Following the election, L. D. Hicks gave a most instructive talk on "Business Methods, and Particularly Advertising," which was supplemented by another earnest advocate of publicity methods, W. B. Franklin of Ocean Grove. Other members expressed their views and the session closed.

The Grand Ball given the same evening was a perfect success. The members, their families and friends, enjoyed themselves thoroughly, every member of the Association seemingly having appointed himself a member of both the Reception and Floor Committees. One A. M. found the dancers still loath to retire, but the demands of those in charge of the hall had to be respected. The success of the closing affair was but a fitting close to so successful a Convention.

The Use of Light and Shade

Light and shade, considered as a means of producing a deception, by making parts of the picture advance and other parts retire, so that everything may keep its relative situation as regards the distance from the spectator, is a necessary attendant upon perspective. It is, however, often violated in the best works, for the purpose of giving a general breadth, or of preserving the light in a good shape; but, when compatible with both these, it is of the utmost consequence; and the painter can enter into a competition with nature only by a perfect knowledge of the best modes of adapting it to such purpose.

JOHN BURNET.

The Official Method of Actinicity Measurement

By FRANK MORRIS STEADMAN

The official adoption of my method of measuring light by the Photographers' Association of America at their recent Convention in St. Louis, October 3rd to 8th, will make the following concise description of that system welcomed by all who are interested in photography.

That part of the resolutions which refers to the method and to the speeding of emulsions is as follows:

"For the standard paper for the measurement of light intensity, we recommend solio and all printing-out papers which, on measurement, shall be found to agree with it in sensitiveness.

"For the standard amount of work that the light shall do we recommend that degree of discoloration which becomes first plainly distinguishable from the original color of the untinted paper. Such tint to be made through a hole in any thin opaque material, as the corner of a note-book, the cover being raised to observe the tint.

"For the scale of values we recommend the following as practicable, one-eighth, one-fourth, one-half, one, two, four, eight, sixteen, thirty-two seconds, one, two, four, etc., minutes. For greater accuracy the interval half way between any two of the scale may be used, as three, six or twelve seconds. The shortest interval, one eighth of a second, is the intensity of the light out of doors on a clear day with the sun from fifty to ninety degrees above the horizon and no shorter or greater intensity therefore exists under ordinary natural circumstances.

"Furthermore, as to Mr. Steadman's method of speeding plates, we recommend that the Association officially request each and all of the plate and film manufacturers of the United States to investigate the method with a view to establishing a uniform system, should the method be found practicable."

THE PHOTOGRAPHER SHOULD BE AN ADEPT AT COUNTING TIME.—Without this ability there is always a feeling of inaccuracy. Practice the following method unless you already have one which is accurate. Arrange a note-book as described and without using the sensitive paper, practice slipping a coin off and on the hole as the following word or phrase is spoken:

For a quarter second say—quar-ter; for a half second say—naught-one-half; for a second say—naught-one-half-and-one. For any number of seconds say: naught-one-half-and-one; one-half-and-two; one-half-and-three, etc.; practice until the hand will move exactly with the speech. Practice while looking at a watch and get the correct speed. Always use the method in all measuring of light and in making exposures. If it is neglected it will be at the expense of accuracy.

BECOME FAMILIAR WITH THE DISAPPEARING SCALE OF TINTS.—To make this scale arrange the solio strip under the hole in the cover of the note-book as directed and cover it with a coin. Then stand close to a window or door and holding the book facing the sky outside, give sixteen seconds of exposure. Then move the slip along to a fresh place and give an exposure of eight seconds. Change again and give four seconds, etc., down to one-half second. Now examine the strip and if the day has been at all bright several tints will be visible. Select the last one, or the faintest visible one, and the time required to make it will be the actinicity of the light in that position expressed in seconds according to the standard method.

USE THIS METHOD OF THINKING OF THE INTENSITY OF THE LIGHT.—Any illumination is of a certain intensity whether we measure it or not. We might as well *know* what that intensity is in numbers. The practiced photographer in the middle of the day need not make the measurement at every sitting but he should



BY HALLETT, TAYLOR CO., INC.
Second P. A. of C. Convention

have in mind the intensity of the light in seconds and should occasionally measure it so as to familiarize himself with the method of thinking. Then if later in the day or if a cloud should come over the sun, a new measurement would reveal exactly how much weaker the light is and the relation of the exposure to the correct exposure in good light would be known. In this simple manner and without employing any method whatever the measurement of the light in seconds would be of great value to all photographers and especially to those who are not already in the business for many years.

AS TO THE OUT-OF-DOOR CONDITIONS.—If the day is clear and the sun high the intensity of the light is practically one-eighth of a second. If the sun be about thirty degrees from the horizon or one-third of the way to the zenith, the intensity is about one-quarter seconds. These conditions therefore never need to be measured. By making the disappearing scale out of door when the sun is high, or by making exposures of one, one-half and one-quarter seconds it can be seen at a glance whether the quarter is the faintest or the second step of discoloration. If it is the faintest, then the quarter second is the intensity. If it is sufficiently deep to be the second tint in the

scale, then it would be known that one-eighth second would be the intensity, and this without really making that tint. This is known by being familiar with the disappearing scale of tints. Every photographer to be free in his work should understand for himself the reason for using a certain speed diaphragm to express the speed of a certain plate and subject. The following simple experiment will make this clear and the work is worth doing as the principal thing is *to understand why* certain things are true and not have to take for granted what some one else chooses to say about them.

Place a person of average complexion in your light as you usually work. Carefully take the measurement of the light at the position of the sitter's head, turning the solio or other P. O. P. which tints as fast, directly toward the strongest light source. The number of seconds that first reveals a *just plainly seen discoloration* when you raise the cover of the note-book to look for it, is the intensity of the light expressed in seconds. Now make a number of exposures with *different diaphragms*, giving the *light intensity* as the exposure each time. (If you have a multiplying camera so that you can make a number of exposures on one plate so much the better.) Then *with normal developer at normal temperature* develop the plate or plates together for a normal length of time, or to get a perfect negative from the exposure which seems in the developer to have been correctly exposed.

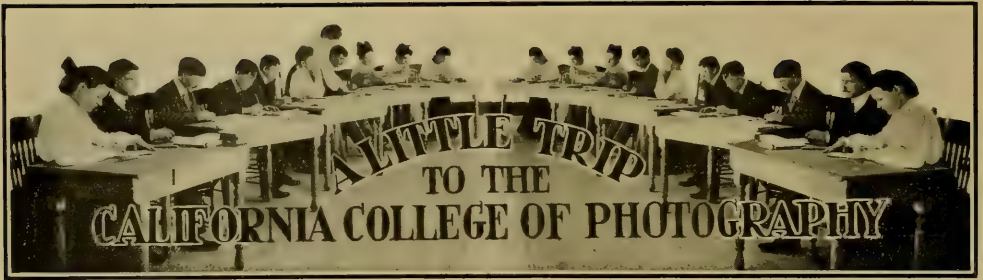
Fix the plate or plates and examine, selecting the one which best suits your individual taste. The diaphragm which was used in making that particular exposure is called the *speed diaphragm* of the subject taken and is the one that will *always* make the same effect in the emulsion *if you give the intensity of the light as the exposure* and a like subject be photographed. Now construct your own speed list of subjects by calling that diaphragm the speed diaphragm for average complexioned portraits. The next smaller will be the one for very fair, and the next larger one for very dark complexions. But if in practice you generally use a certain diaphragm you can tell what part of the light intensity to give by knowing the relation of the diaphragm you used to the speed diaphragm of the subject that you are photographing. If the one you will use is two numbers larger than the speed diaphragm of your subject then the exposure will be one-quarter of the light intensity, if it is three numbers larger it will be one-eighth of the intensity, etc.

Any worker in the same manner can make a speed list for all the kinds of subjects that he photographs and the plates used will by no means be wasted as they will enable him to solve once for all the problem of exposure so that a plate need never afterward be lost. In this manner also the development of plates can be done with the greatest possible simplicity. This is so because a plate that is perfectly exposed needs no modification in development. It is irrelevant to discuss whether it is *possible* to modify in the developer or not. It at least is unnecessary if the exposure has been correct. When the list of subject diaphragms shall be placed in every box of plates, the worker will need only to look at it to see the diaphragm for the subject in hand that harmonizes with the light intensity exposure. If for your taste a modification is found necessary you can determine the diaphragm that best suits you at the first trial. If the result is over-timed according to your taste then place the speed diaphragm of that kind of subject at the next smaller or even perhaps two numbers smaller. Place it exactly where you want it to be so that the intensity exposure will suit you. If these helps are taken advantage of not a plate need be lost by wrong exposure. I am pleased to say that two of the largest plate factories have already taken steps to include the system in their manuals and to sanction publicly the speed list that I hope to have ready for publication soon.

The Value of Harmony

Harmony in painting is the connection and agreement of one part with another, either as regards form, light and shade, or color: this agreement proceeds either from a succession of the same forms in different degrees of distinctness, such as arise when we cast a stone into water, producing a succession of undulating circles, or by one form depending upon its adjoining for its completion and unity, as is the case in poetry; or the harshness of isolated forms may be broken down, and harmonized with the whole, by their being hinted at, or faintly repeated in various portions of the picture.

JOHN BURNET.



Friday morning, November 11th, the editor decided that a run down the road on his part would not entirely block the revolution of the earth on its axis, and so, after the morning mail was disposed of, a car was taken for the Third-street depot, with Palo Alto as the objective point. The beauty of the selection lies in the fact that one can go or return at almost any hour, the service is so well arranged. As it happened, naturally, after neglecting entirely to consult a time-table, one train was missed by a few minutes, necessitating a wait of less than an hour, or a trip to the ferry for the other route.

Arriving in Palo Alto after a somewhat foggy and damp morning in the city, I was agreeably surprised to find the weather as sunny and pleasant as one could wish. The town itself is most pleasing to the eye. Large trees of the live-oak family shade inviting benches, as well as the small station around which extends what is called the "Circle," composed of neat and prosperous looking retail establishments. Leading from this Circle and directly opposite the train I found the leading business street, or University Avenue. The first person called upon was Mr. Crandall, one of the directors of the College and an old friend of mine. Another half-block found another business man who is a director. The third block and the handsome new College building is reached.

The entire upper or third story of this building, and most of the second, is devoted to the needs of the California College of Photography. The assembly-room, which is on the second floor, is the largest hall in the town. A lecture on the

chemical properties and composition of water had formed a part of the morning's work, and the janitor was requested to allow the tables and chairs to remain in position in order that a picture might be taken of the room. Passing up stairs, a cordial greeting was received from my friend Mr. Dudley, who at once led me on a tour of inspection. The class was discovered busy washing their negatives, the result of the lesson under the skylight which had followed the lecture in the



A CORNER OF THE ASSEMBLY-HALL

assembly-room. The negatives were to be placed to dry preparatory for the retouching instructions to come later in the day.

Introductions were hardly thought of in the busy life of the school; in fact, most of those connected therewith were already acquaintances and friends, having been met at the recent Photographers' Convention in San Francisco, if not before. The luncheon hour being at hand, a two-blocks' walk back to the delightful "Circle" found Mr. Dudley and myself enjoying a brief respite.

Returning to the school an hour later, we found a class hard at work, seated before small tables in a semi-circle around a few simple objects on another table before a background in the operating room. A lesson in drawing, under the able instruction of Miss Clara Weisman, head of the Art Department, was in progress. The rapid progress that I later found was being made by the pupils in the retouching class was here explained. The advantage of thus making elementary



THE CLASS UNDER THE SKYLIGHT

drawing a part of the study can easily be realized by inspecting a small part of the work. The added progress that is made in the retouching department can be accounted for in no other way. Imagine, if you can, as we saw later, a long row of busy students, each over his or her individual retouching desk, laying on the lead with a delicacy and directness that one has learned to associate only with long practice and much study, and then try to realize that even the most advanced have had less than a month's instruction.

Every department was found most fully equipped, the library and laboratory well supplied. The dark room was a revelation. Imagine a large room, the size of an ordinary parlor, entered by a revolving door that admits no light and fitted with a convenient sink extending entirely around the walls, except at the corner at which the "door" is located. Perfect ventilation and uniform temperature are both

provided for. Just outside this room is a wide hall, given over to well-constructed lockers for the use of the students in addition to those supplied in the laboratory department. The rooms allotted to the various printing processes are models of convenience. The reception rooms and offices are the only ones which Mr. Dudley seemed to fear needed an apology. These, he explained, had been neglected for want of time.

A negative of the assembly-room, resulting from the joint efforts of Mr. Dudley and myself, a trip through the beautiful grounds of the Stanford University was proposed. Lying directly opposite the town and but a ten or fifteen-minutes' walk from the "Circle" lie these magnificent buildings, which need no introduction to my readers. This group of buildings is conceded to be the most unique and elaborate ensemble of college buildings in the world. The Memorial Arch is exceeded by only one other like structure in the world. The grounds upon which the Leland Stanford Junior University is situated embrace a tract comprising some



THE CLASS IN RETOUCHING

thousand acres, the immediate grounds being well planted with large palms and trees of every description. Although the month is one in which we have just received news of snows and storms throughout a good part of the East, here we find the people walking and riding about, often bareheaded, enjoying flowers and palms, and the large trees that encompass the grounds in all the glory of full foliage. No saloons are permitted in the town, and as all the buildings have been erected within the last ten years, the aspect is most pleasing. A more charming location could not be selected in which to spend a few months in the delightful study of photography, and when this fact is coupled with the superior facilities offered by the California College of Photography for the acquirement of a practical and thorough knowledge of the art in all its branches, there is little cause for surprise at the success which the College is achieving.

Dinner at the home of President Dudley, a chair-car and a smooth road-bed for a brief hour's ride, and regrets that the CAMERA CRAFT office could not be moved thirty miles south, ended the day.

CAMERA CRAFT

ISSUED MONTHLY BY

THE CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. IX.

SAN FRANCISCO, CALIFORNIA, DECEMBER, 1904

No. 6A

Concerning this Issue and Its Location

This issue, as was explained last month, will be considered as a part of the volume of which the last six numbers constitute the remainder. It will be numbered Volume IX, No. 6A. This will give a volume containing seven issues, and while it is somewhat irregular so to apportion the numbers of a publication, it will allow us to meet the wishes of a large number of our subscribers who have complained of the past arrangement which caused the numbers for any particular year to extend through two volumes and a part of a third. The index, which covers these last seven issues, will be found bound up with this number. With the next number a new year and a new volume will start simultaneously, and I trust the new arrangement will prove as satisfactory to our readers as it must do to our own subscription and business departments.

The Second P. A. of C. Convention

The Second Annual Convention of the Photographers' Association of California which was held in this city during the last week of November was a worthy follower of the previous most successful convention that was held under the auspices of the same body of energetic and enthusiastic men. The experience gained and the enthusiasm born of the success achieved in their former efforts in this direction, could but result in added and increased cause for congratulation at the results accomplished by this, their latest and most creditable Convention. The success that has crowned the efforts of those who have realized the importance of an organization such as the one which is now so well supported and so prominently identified with the photographic interests of the Coast and the State, is all that could be desired; it is more, it is a source of inspiration to those earnest workers in other states who can see the need of like organization but who fear that the desired amount of enthusiasm, support and loyalty could not be enlisted. The professional photographer of today is as a rule, much too broadminded, much too unselfish and much too wide-awake to the possible advantages of such an

organization, to withhold his support from any plan that promises a fraternal fellowship and a unification of interest as does a thoroughly organized and well-conducted state or other like localized association. Our report of the Convention on another page will give full details of the proceedings and in a small way indicate the success which was achieved.

The Prize-Winning Foreign Exhibit at the Recent Convention

Much gratification is afforded CAMERA CRAFT by finding that the handsome bronze trophy which was awarded by the Photographers' Association of California to the best foreign exhibit of three pictures shown at their last Convention, went to a photographer in this territory. Mr. Curtis came into competition with some of the strongest men in the profession, and while individual pictures in several of these exhibits might have outclassed the best of the three displayed by him, the combined markings of the three shown by Mr. Curtis secured for him the prize. Our congratulations are extended to Mr. Curtis, not only on his ability as a photographer, but on that which seems still rarer, an ability to determine which of his productions are most meritorious; in other words, a capability of selecting three pictures without including one that should detract rather than assist its fellows.

The Next Convention at Portland

As will be seen in the report of the last P. A. of C. Convention on another page, the next convention will be a joint one. CAMERA CRAFT believes this arrangement will result in great good to both organizations. By a joining of the forces a more important convention will be gathered than could be expected as a result of the most enthusiastic efforts of either body acting alone. Not only this, but the bringing together of the two Associations should result in an increased realization of the importance of co-operation and mutual upholding of the standards of the craft. The Exposition to be held in Portland will prove an added attraction, and there can be no doubt but what the attendance will be such that the highest expectations of the most sanguine will be more than realized.

Our Early Emancipation

That the idiosyncrasies of the weather will early cease to be a matter of consideration in the production of photographic pictures, there can be no doubt. The use of various forms of artificial light is now both profitable and popular. Several of the leading men in the East have equipped their operating rooms with electric light of the new form, making it possible to secure well-timed negatives with all the ease that could result from uninterrupted and unvarying efforts on the part of the sun. The production of prints entirely regardless of weather conditions has also been made a realization containing no element of doubt or uncertainty. The Aristo Arc Lamp shown at the recent Convention clearly demonstrated the possibility of producing prints as rapidly as could be desired. This lamp has a capacity of some eighty printing frames and requires a little less time for printing than does direct sunlight, Aristo-platino prints from well-timed and well-developed negatives requiring about four minutes. Solio prints require about three minutes and platinum a little less. Direct or alternating current can be used.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

A Common Mistake

To one whose lot brings him in constant contact with beginners and their productions in the photographic line, nothing seems more of a hindrance to their advancement than their uniform inability to determine whether certain results are due to under or over-exposure on the one hand, or under or over-development on the other. Often I am sent prints that are clearly faulty from over-development in an unsuitable developer, and yet the sender goes to the trouble to explain that he is aware that the plate is over-exposed because the high lights are so chalky. Another will send in a print from a sadly over-exposed negative; one so badly over-exposed that the securing of proper density was out of the question except by most careful treatment, and he will explain that owing to the exposure being too short for the poor light everything comes out black in the print. It would seem needless to point out that both are wrong, and yet the error is a most common one. Let us go over the matter of a few negatives. One that gives a chalky looking print is clearly an under-exposed negative, or else it was correctly exposed and developed too long or with a too strong developer, possibly both. If you find yourself making such negatives I would advise the employment of a more dilute developer, particularly during the warmer months, when the action of all chemicals is accelerated by the increase in the temperature. If you have been using one of the ready prepared developers, try using Rodinal, diluting it to the limit advised on the formulæ sheet. Should development become too prolonged it is an easy matter to add a little of the concentrated solution. On the other hand, if your negatives have an inclination to be of the character that gives you very dark prints with no high lights where they should be in the

print, you are evidently giving exposures of too long duration. Try a developer that is stronger, and if possible cut down the amount of alkali in the formula used. Of course you will shorten your exposures, but there is another cause that may be to blame for the unsatisfactory nature of your negatives. Their thinness may be due to fog caused either by a leak in the camera, or through the use of an unsafe developing light. Carefully covering the camera with a focusing cloth will guard against the first, and covering the tray during development will guard against the second, at least for an exposure or two to determine where the fault lies.

Sanger Shepherd's Process

One of our subscribers in Illinois asks for information concerning the discovery of the process and the principle upon which it is based. As to the discovery I can give little information other than that it is credited to the gentleman whose name it bears, and rests mainly upon the use of a single gelatine film. He bases the process upon the fact that a gelatine relief which has been stained with a suitable dye if applied to a wet sheet of paper which has been coated with gelatine, the color will leave the relief and attach itself to the soft gelatine on the paper. Three negatives are made of the object to be reproduced, each through a different color screen. Each negative is used to make a gelatine relief, each of the three gelatine relief plates so secured being immersed in their respective dyes. These are in turn brought in contact with the dampened sheet coated with the soft gelatine, which secures and retains the different colors in proportion to the thickness of the various parts of the several reliefs; these various thicknesses of course regulating the amount of color originally absorbed by the relief. By a little care in selecting the right negative, any amount

of retouching can be done without disturbing the relationship of the colors. While the making of colored photographs through the agency of three negatives is by no means new, the obtaining of satisfactory prints dates from the invention of this process.

Some Background Terms

Oil paint is made by mixing white lead with linseed oil and thinning with turpentine, securing the desired shade by the addition of drop black. With what is called distemper, glue is substituted for the oil, and water for the turpentine, using drop black, whiting and burnt umber as the body. A background painted in pure oil colors would be of little use as a background for the reason that its glossy surface would cause reflections. To overcome this the oil is "flatted" by adding a dryer to the paint, but the effect of so doing is to rob the work of its charm as a painting in oil and for this reason the process is little used. Sizing is simply the application of a thin coating of glue dissolved in water to the muslin or other support, in order that the paint to follow may not sink into the material and appear too flat and lifeless.

To Develop Uncertain Exposures

I read an article not long since in which the amateur was advised to get detail first, and then so handle his developer as to secure the desired density. This is so at variance with my own practice that I think a word of caution should be put forth. In the case of known under-exposure such a proceeding as this article recommends would no doubt be the most desirable method, but where there is any doubt about the matter it would seem like courting disaster in a majority of cases. There is liable to be present at all times a certain amount of surface fog. The flashing up of the detail with a developer strong in alkali will bring this fog strongly to the fore, and any attempt to bring up density afterward will simply intensify this fog and often, particularly in the case of over-exposure, fail utterly in giving desired density. The more advisable plan is to first flow the plate with a developer containing a part only of the normal amount of accelerator, and by the action of the image, whether quick or slow in coming forward, determine if further addition of the alkali is or is not advisable. With but a little practice, starting all exposures in a developer of a certain modification as

to accelerator, one can judge by the length of time consumed in the first appearance of the image just what amount of accelerator should be added to produce in the finished negative that degree of gradation required for the printing process desired to be used. In my own practice I avoid the use of bromide entirely and depend upon this method of working. All exposures that are at all doubtful as to timing are first placed in a solution containing but one fourth of the alkali called for in a normal developer. A tray of normal developer is at hand and as soon as the appearance of the image indicates that a certain plate has secured a correct or less exposure, it is placed in this latter tray. If but slight over-exposure is indicated, the plate is alternated between the first and last tray, simply as being more convenient than altering the developer in the first tray and having the same result. If too much density in the high lights is threatened, alternating the plate between a tray of clearwater and the normal developer will restrain its density while allowing detail to make its appearance.

Determining Focal Length

When a lens of known focal length is at hand, the determination of the focal length of any other lens by comparison is usually a very easy matter, as the standpoint being the same the linear magnitude of any sharply focused object in the scene will have a constant relation to the focal length of the lens. Supposing, for example, that two distant landmarks, such as factory chimneys or church spires, are separated on the screen by $6\frac{1}{2}$ inches when the camera is placed at a certain window and an $11\frac{1}{2}$ -inch lens is used, we have it as a datum that for this particular standpoint and these objects the separation as measured on the focusing screen will be to the focal length of the lens used, as $6\frac{1}{2}$ is to $11\frac{1}{2}$, that is, 13 to 23. Such a determination as this having been once made with a lens of known focal length, all that is necessary in determining the focal length of any other lens is to focus the selected objects sharply, and to measure the distance on the screen. A simple proportion will now give the required focal length. A more rapid method when many lenses have to be determined, is to so hinge two light bars together as to form a proportional compass, which, if properly made, will at once translate the separation into the focal length of the lens.

A Photographic Digest

By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

On the Atmospheric Deterioration of the Sulphites

A. and L. Lumière and A. Seyewitz publish in the *British Journal of Photography*, July 22d, a full report of their investigations on this subject of which the following summary will give the interesting points:

"(1) Crystallized metabisulphite of potash does not appreciably alter either in dry or moist air.

"(2) Solutions of metabisulphite of potash kept in contact with the air alter. This alteration is markedly less than that of corresponding solutions of soda sulphite in the case of diluted solutions. On the contrary, the alteration is greater in the case of metabisulphite of potash than in that of soda sulphite when the concentration reaches 20 per cent.

"(3) The influence of the concentration of solutions on their oxidability in the air is much less important with metabisulphite of potash and bisulphite of soda than with sulphite of soda.

"(4) Crystallized bisulphite of soda is very liable to alteration in the air, but solutions behave almost in the same manner as those of metabisulphite of potash.

"From a practical point of view the result of our experiments on the alteration of different derivatives of sulphurous acid used in photography when exposed to the air is that for the preparation of developers anhydrous sulphite of soda appears to be preferable to the other derivatives of sulphurous acid.

"Diluted aqueous solutions of metabisulphite of potash, although slightly less alterable in the air than those of anhydrous soda sulphite, present the grave inconvenience of necessitating the addition of an exactly calculated extra quantity of alkali at the

moment of development, which, from our point of view, would cause metabisulphite of potash to be rejected as an alternative to the use of anhydrous sulphite of soda in practical work."

Factors Affecting the Size of the Grain of Reduced Silver

To the same indefatigable workers we are indebted for an investigation into the above subject. The results published with full experimental evidence in the *British Journal of Photography*, July 15th, are thus summarized:

"1. The size of the grain of reduced silver deposited by normal developers as ordinarily used is practically invariable.

"2. No apparent influence is shown on the size of the grain of reduced silver by temperature, concentration, or duration of development.

"3. Excesses of alkali or alkaline bromide seem to produce a very slight enlargement of the grain.

"4. Over-exposure appears to be a factor toward the reduction of the size of the grain of silver reduced by a developer.

"5. Two developers not generally used, viz., paraphenylene diamine and orthoamidophenol, used with soda sulphite, produce a deposit like that obtained when collodion emulsions are used, and of which the grain is much finer than that produced by other developing substances.

"6. The color of the deposit seems to vary in relation to the size of the grain. The finest grain corresponds to a gray violet color like that shown on the reduced silver of collodion emulsions.

"The various developers may be classed according to the increasing size of the particles of silver reduced by them, and show

four types of size represented by the accompanying plates. These plates show that the first type presents many important differences to the other three, which differ but little between themselves.

"First Type.—Paraphenylene diamine or orthoamidophenol used with soda sulphite only.

"Second Type.—Paraphenylene diamine or orthoamidophenol used with soda sulphite and a small quantity of alkaline carbonate.

"Third Type.—Paranol used with soda sulphite only. Quinomet used only with soda sulphite alone or with the addition of acetone. Paraphenylene diamine used with soda sulphite and a normal quantity of soda carbonate. Normal metol, eikonogen, or ortol developers (formulae as above).

"Fourth Type.—Normal hydroquinone-metol, hydramine, paranol, hydroquinone (formulae 1 and 2), pyrogallie acid, edinol, dianol (or with the addition of soda bisulphite), or quinomet used with caustic lithia (as in formulae above)."

Color Screens—A Good Suggestion

J. Goulding in a recent number of the *English Amateur Photographer* makes a suggestion that promises good results. He had been seeking to use a color screen in combination with a telephoto lens and found that the usual position for such a screen destroyed the definition. His solution of the difficulty is best given in his own words:

"A makeshift was eventually resorted to; sheets of the very thin gelatine used by confectioners and bon-bon makers, a bright greenish yellow in color, were taken and cut in pieces a little larger than half-plate size; a piece was inserted in front of each plate in the dark slides, the overlapping portions having been neatly folded over and fixed with a touch of adhesive to the back of the plate. In this way each plate carried its own screen in the position likely to cause least optical disturbance. The exposures were made, the colored gelatine torn away from each plate before development, and the results were quite good—there was no perceptible loss in definition.

"There is much to be said for a system of screening on these lines. The *position* secured to the screen, i. e., immediately in front of the sensitive surface, is theoretically correct. As regards material it is admitted that screens cannot be made from colored glass to give a *pure* tint; the best screens

at present available are made from two pieces of *clear* glass with a colored film cemented between them; this involves the working of *four* surfaces with the same accuracy as a lens, and even then the coloring matter is always liable to fade.

"In the makeshift referred to it must be borne in mind that such colored gelatine had to be taken as could be readily found; it certainly appeared to be about the right tint, judged by the eye, but it had not been intended in any way for the use to which it was put. If there were any demand for this thin gelatine for photographic purposes, it could easily be had in any particular shade of any particular dye or dyes, and a maker of isochromatic plates could supply it to suit *exactly* his make of plates, which would be much better than the haphazard relationship which usually exists at present between plate and screen.

"Excellent isochromatic plates are sold 'ready backed.' Which maker will be the first to offer plates that are also 'ready screened' by a suitable medium? Further, an arrangement of this kind could be adopted to great advantage for isochromatic film in such a device as the Premo Film Pack, where, in addition to acting as the color screen, the gelatine sheet would prevent contact between the sensitive surface and the paper support of the next film, and would remove the possibilities of scratches in working the pack."

A Universal Lens Flange

Most serious workers use more than one lens, not to speak of a pinhole plate. Personally, the trouble of screwing and unscrewing a dozen times or more in the morning, has been a very real annoyance, and loss of time, not to speak of opportunity. I have often thought of having my lenses fitted with a well-made adapter that would simply push in instead of screwing, and I believe that for one or two changes this would be the simplest solution. I have however just learned that Mr. Rayment (125 Earlham Grove, London, E. England) has made a universal adapter on the plan of an Iris diaphragm. It is thus described:

"In a ring, having a rack cut on its circumference, a strong Iris diaphragm is enclosed. The size or diameter of the opening of the Iris is regulated by a pinion revolved in contact with a rack on the encompassing ring. So that the rear portion of a lens tube (up to the shoulder) being

introduced into the aperture of the Iris, the pinion is revolved and the strong leaves of the Iris firmly grip the lens tube. To make this grip doubly secure, a clamping arrangement is provided, which renders any relaxation of the hold on the lens an impossibility. The working portions of the mechanism are of suitable metal, but the external frame is of aluminum, so reducing the weight to a minimum. It is made in several sizes, the smallest taking lenses of 2 inches and less in diameter, and the largest will receive lenses of $4\frac{1}{2}$ inches and less diameter."

The Photographic Rendering of Skies

To those who have the faculty of translating color into black and white, the sky is rendered more or less gray (in its monochrome equivalent) and never as white as the paper on which the picture is printed. The color and dependent color value of the blue varies with the direction of the light, the atmosphere, and the sun's altitude. Facing the sun, the blue is almost effaced; opposite, it is strongest and darkest. It is nearly always lighter at the horizon, but in large towns the effect of dust and vapor may reverse this appearance when the sky is seen over the houses. In spring, when there is an east wind in this country, the blue has a dryness and opacity that is absent at other periods. In the East there is a depth of blueness that is almost black. All these varying conditions of color, luminosity, and gradation have to be represented in black and white by various shades of gray.

BLUE SKY WITH CLOUDS

The task is somewhat easier where clouds are present. Even in Nature wisps of cirrus and the so-called "mackerel sky" greatly increase the idea of depth and distance. These forms of clouds are really simpler to deal with than the bolder cumulus with their strong shadows and perspective.

RENDERING OF A GRAY SKY

When we get a gray sky the problem is easier still. It has not the even gradation of the blue sky. The clouds which float across it are usually dark, and are not white in the high lights and darker in the shadows than the ground, as is the case with cumulus in a blue sky, and they can be photographed without so much reference

to the problem of color. The landscape also is low toned and can be harmonized with less difficulty, most of it being probably lower toned than the sky. There are often instances, however, where the sun shines out brightly after a passing storm, when the landscape, or parts of it, are brilliantly illuminated against a black cloud, and are many tones lighter. A good example of this in painting is seen in Francois Millet's April storm effect with rainbow in the Louvre, which has been most effectively reproduced in a photograph. The photograph shows the illuminated portion of the land and woods lighter than the dark sky, as it should be.

The gray sky associated with snow-scenes generally appears particularly truthful in photography.

THE COLOR VALUE OF BLUE SKY

It is quite a difficult matter to represent the ethereal blue of the sky by a monochrome process on paper, such as photography, which goes so much beyond mere suggestion. Apart from the technical difficulties of preserving the color values and tones of the landscape objects that meet it, is the task of rendering in some degree the almost unattainable depth and palpitation, as it were, of which we are conscious when looking at it, but which a gray deposit on paper does not at all suggest. We know that a blue sky as seen opposite the sun, rendered with fairly accurate color relation to the landscape and slight gradation from horizon to zenith, is disappointing in an ordinary platinotype print and fails to convey the impression of the original. This is still more marked in the skies of Southern Europe and the East. Have we yet seen Italy, Egypt, or India portrayed with the true value of the blue sky in photography? In those countries opposite the sun it may be said with truth to be darker than anything terrestrial save the shadows. Yet if an attempt be made to sun down the sky to the proper value the result will be unnatural, and the landscape appear as if under snow.

PRINTING PROCESS

The printing process chosen has much influence. One cannot help feeling that the evenly diffused gradation of photography is at fault. The luminousness of the sky is much better shown in mezzotints and etchings than in photographs, where not only are the gradations arbitrary but the surface is

broken up. If the photograph deposit be broken up in some way—partly to be achieved by the use of rough paper, by printing through some material (in the case of a plain sky) or by the use of a process such as gum bichromate, where a broken up surface can be left by means of a brush—the sky can be kept more approaching its proper value without appearing too opaque.

IMPORTANCE OF CORRECT PRINTING DEPTH

The depth of printing of a sky, which we have determined upon as correct, cannot be varied without completely changing the character of the picture. Quite a small difference will suffice to spoil the original intention. It is better to err on the side of being too light than too dark. Clouds too heavily printed will seem too near as well as too solid, and lose their vaporous character.—Eustace Calland in the *Practical Photographer*.

Repair of Broken Negatives

"The cracked negative was laid face upward upon a sheet of glass, and was first soaked in water till soft, according to the instructions given in the clipping, and was then immersed for ten minutes in a ten per cent solution of formaline (one ounce of the solution as bought, in ten ounces of water), to which two and a half per cent of glycerine was added.

"It was then dried without rinsing, and a cut made through the gelatine within an eighth of an inch or so of the edge of the plate. The next thing was to immerse it in a twenty per cent solution of sodium carbonate, and then, after draining, in a five per cent solution of hydrochloric acid. Minute bubbles of carbonic acid gas at once appeared both on the surface of and beneath the film, and it was then an easy matter to detach it from the glass. It was rinsed in cold water, and as it had stretched a little was caught upon a larger plate from which the silver bromide had been dissolved out in the fixing bath.

"In the case of the broken negatives, I first arranged the pieces side by side on the wet gelatine side of an old negative, and when dry and hard I flowed over the surface a fairly thick coating of warm gelatine. This was allowed to dry, and the negatives were then treated in the same way as the cracked one. A little retouching had to be

done afterward, but much less than was supposed would have been necessary."

The above method is given by Herbert W. Page in a recent number of *Photography*, and so far as it relates to cracked negatives is well known, but the modification for the repair of broken plates is, I believe, good and original. From a slight test that I have made thereof I find that there is sometimes a little danger of the gelatine coating dipping down into the cracks and afterward interfering with the separation of the film. This may be prevented by touching the edges of the broken pieces with the least possible quantity of pure Canada balsam (not the redissolved article used in microscopic mounting).

Removal of Stains

J. B. Hollins in the *English Amateur Photographer* of September 8th, published an exhaustive and useful description of the ways of dealing with stains on plates and paper. From these I cull the two following as rather common stains, the treatment of which is not known:

First.—Blue paper in contact with a damp negative may leave brown marks thereon. To remove these soak the negative in equal parts of ammonia and water for a few minutes, wash half an hour, and immerse in dilute hydrochloric acid twelve minims to the ounce. When the stains are gone, wash five minutes.

Second.—After the use of the persulphate of ammonium reducer the negative is apt to acquire a pink color. This disappears if the plate is treated with dilute oxalic acid.

Sepia Tones on Black Platinotype Paper

The following formula of Mr. Juston gives a series of tones running from cold brown through warm brown to sepia. Make up the two following solutions, equal parts of which are mixed just before developing. The solution should be slightly warmed. Excess of No. 2 gives increased warmth of tone.

No. 1

Oxalate of potash.....	2 ounces
Water	14 ounces

No. 2

Citrate of potash.....	2½ drams
Citric acid	4 drams
Mercuric chloride	1½ drams
Water	14 ounces

With the Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

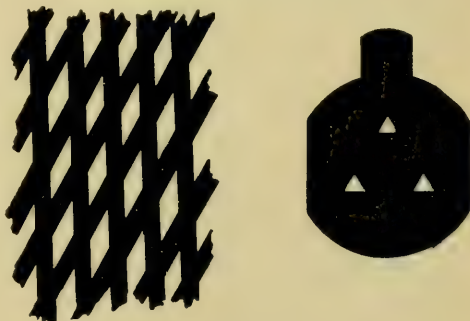
After Fifty Years

That photography has been of the greatest importance since 1854, is proven by the fact that the *British Journal of Photography* has been in existence that long. This estimable publication has just issued its jubilee number which contains about one hundred pages of highly interesting matter. During the last half century the *British Journal* has been the leading light of photography. Its contributors have been the world's greatest investigators and more new discoveries have been announced in its pages than in all the other photographic journals in the world combined. Process work has come in for its share of attention and a great deal of the work of American inventors has been thoroughly exploited in its pages before a line was printed in the United States. But science knows no country and we can only hope that the *British Journal* will help us all along as much in the coming half century as it has in the past.

New Half-Tone Screen

Under the title of the "Last Word on Half-tone," William Gamble, editor of the *Process Year Book*, contributes to the jubilee number of the *British Journal of Photography*. Mr. Gamble holds that far from the last word has been said on half-tone. Of late years but little experimental work has been done in it. He feels that much finer results will be obtained from three-color blocks if screens of one hundred and seventy-five lines be used instead of the one hundred and fifty line screens in vogue at present. The increasing good quality of typographical printing will, he thinks, lead to the use of finer and finer screens in half-tone blocks until screens of five hundred lines or finer are used. The

effect of the half-tone screen will then have entirely disappeared and a result equivalent to the continuous tones of the photograph will be obtained. Turning to another new phase of the half-tone process, Mr. Gamble continues: "I would remark that it had been supposed that the question of the best angle for crossing the screen lines had been settled beyond controversy at the angle of ninety degrees, with the lines laid at forty-five degrees to the sides of the plate. But this shows how the half-tone worker gets into a rut, and keeps in it because every one uses it. A loophole is left for an ingenious experi-



NEW HALF-TONE SCREEN AND DIAPHRAGM

menter to step in and patent a process of ruling the screen with the lines crossing at sixty degrees. This idea was first described by U. Ray, but Arthur Schultze, of St. Petersburg, forestalled him by obtaining German and British patents on it last year. This screen actually gives a much smoother and more pleasing effect than the screen with ninety-degree crossing, as I can testify from results I have seen. It is a further advantage of this screen that multiple diaphragms work well with it. Part of Schultze's patent consists in the use of a diaphragm with three openings, which may

be triangular, square or round, disposed at the corners of an equilateral triangle. Ray claims that with such a screen, and with his method of using multiple diaphragms, it is possible to use only the one screen in the one position for three-color work, and yet not get any of the moiré patterning which usually results from superimposing the prints from three negatives taken with the screen lines at the same angle. I think it will be gathered from the foregoing that by no means the last word has yet been said on the half-tone process, and that it has still greater possibilities than it has yet achieved.

Bleaching Prints

Many photographers complain that the mercury method of bleaching a silver print on which a drawing has been made is not "permanent." That is, the photograph comes back in a few weeks and if the customer wants another cut from the drawing they cannot make a line negative. There are two causes for this trouble, but the most general is the most general trouble in every other department of photo-engraving—lack of cleanliness. After fixing in hypo the print must be washed at least an hour. It is even more necessary that all the hypo be eliminated than in regular photographic work, because in regular photographic work when the print is washed it is finished. When the print has to be bleached it is subject to another chemical action and we all know how deadly is a mixture of hypo and mercury. The bleaching bath should be mixed in the proper proportions. Use the following:

Bichloride of mercury	1 ounce
Alcohol	6 ounces
Hydrochloric acid.....	1 dram

Alcohol is the safest to use, because an artist is liable to make the mistake of using non-waterproof ink which would lead to disaster if a water solution of mercury were poured over the print. Allow the drawing to stand a few minutes after the print has disappeared then wash a few moments under the tap. Such a print will be as permanent as anything photographic.

Paint for the Dark Room

A paint for the dark room that will be non-actinic and impervious to chemicals is a long-felt want. As a general thing walls,

benches and floors are either corroded with chemicals or coated with crystals. M. Clere, in *La Photographie Francaise*, one of the best of our French contemporaries, now states that, having experimented for several years in the chemical laboratories of the Faculté des Sciences de Paris, he has finally adopted the following treatment with every satisfaction; the following solutions must be prepared:

A.

Sulphate of copper.....	125 grams
Chlorate of potash.....	75 grams
Bichromate of potash.....	50 grams
Water to	1,000 c.c.

B.

Aniline hydrochloride	150 grams
Water to	1,000 c.c.

The solutions should be heated to boiling point, and A. is liberally brushed over the bench and allowed to dry, and then B. is applied and allowed to dry. A crop of crystals will appear as soon as the wood is dry, and these must be brushed off, and again successive coats of A. and B. applied as before. This treatment gives a deep greenish coloration to the wood, and if treated with boiled linseed oil or a thick paste of hard paraffin and vaseline, it will be quite impervious to water. The whole operation will only take about four hours, and it should be left for this time to dry thoroughly before use.

Varnish for Cameras

The interior of cameras and plate-holders should be kept black. Not for the purpose of preventing direct fog, because there is little danger of that to the slow wet plates, but to avoid reflections while the lens is open. Here is a formula for the purpose that fills all requirements. It should be used often:

Shellac	40 parts
Borax	20 parts
Glycerine	20 parts
Water	500 parts

After dissolving, add 50 parts aniline black.

Club Notes

Items From the California and Other Camera Clubs

By C. A. GOE

Monthly Exhibition

The November Camera Club lecture promises to be most interesting. Our good friends, Mr. and Mrs. E. H. Kemp, will serve, the former at the lantern and the latter as lecturer. There are very few who have not read "Quo Vadis," and while reading have pictured in their minds the many scenes enacted, and it is left for the Camera Club, through Mrs. Kemp, to take its friends back to the old Roman days and show them the people, the buildings, the streets and the events of that period. Mrs. Kemp has not lectured before the Camera Club for many months, but as we remember her description of the "Passion Play" we must certainly look forward with a great deal of pleasure to hearing her again and on a subject so full of interesting details as "Quo Vadis."

Demonstration

On Friday evening, November 4th, Gilbert Hassell delivered the second of the series of lectures which he is giving before the Camera Club. The subject of "Development" following that of "Exposure" was particularly interesting, and the rooms were filled to their capacity. The Entertainment Committee on the same evening showed a selection of slides from the Reading Lantern Club and Buffalo Camera Club.

Announcement of the Print Committee

Miss Frances Reid McCulloch and Miss Grace Hubley will give a joint exhibition of their work, upon the Club-room walls, from November 15th until December 15th inclusive. This exhibit is now on the walls and does the ladies great credit. They have worked very hard to make it a pleasing display, and great success has crowned their efforts.

California Camera Club Membership

To the readers of CAMERA CRAFT who are not members of the California Camera Club and who are not aware of the advantages to be derived from a membership therein, the following information quoted from the official program is given:

ACTIVE MEMBERS

This class of members includes all those over eighteen years of age who practice photography or kindred arts and sciences. The entrance fee for active members (except Army or Navy Officers, or officers of any Scientific Corps of the United States) is \$10, and dues \$3 per quarter. Active members are entitled to all the privileges of the Club, and are allowed eight tickets to each of our monthly public exhibition.

ASSOCIATE MEMBERS

Ladies belonging to the immediate families of active members shall be eligible to this class. Dues, \$1.50 per quarter, and no initiation fee. They shall be entitled to all the privileges of the Club, except voting and holding office, and are allowed four tickets to each monthly exhibition:

CORRESPONDING MEMBERS

This includes all persons living at a distance of not less than twenty miles from San Francisco. Dues, \$1.50 per quarter, and no initiation fee. They are allowed all the privileges of the Club, except voting and holding office, and are allowed four tickets to each monthly exhibition.

SUBSCRIBING MEMBERS

The rights of subscribing members are limited strictly to exhibitions. They have no other privilege in the Club. Every subscribing member will receive four tickets to each one of our monthly exhibitions on payment of \$1.50 per quarter, and no initiation

fee is required. The number of members in this class is limited to 250. It is the intention of the Exhibition Committee to keep up the high standard of these lectures, and we hope that our many friends will give us the same support in the future as in the past.

Is it not worth your while to become a member of the Club? A visit to the Club Rooms will convince you that they contain conveniences and offer advantages which can not be excelled. When you do visit the rooms you will find blank applications for membership on the Secretary's desk, and you can answer the above question by filling it out.

First American Salon

A large box of pictures from the Pacific Coast has been forwarded to New York by the local committee to be submitted to the jury of the First American Salon. The San Francisco contributors to all eastern salons have always been fortunate in having their pictures accepted and no doubt this one will prove no exception, although there are eight or ten thousand pictures submitted.

Now that the First American Salon is soon to be held and the American Federation will be sending out the exhibitions to the different clubs, members of the Federation, it is the proper time for San Francisco to make arrangements to secure a membership and present this exhibition to our City's devotees of the camera. It is expected that some eight or ten interested parties will form a pictorial organization for the purpose of securing this Salon, which will have a world-wide reputation by the time it reaches us, for it will have been exhibited in the important art centers of America. In our next issue we hope to make a definite statement in this regard.

Salon Club of America

The Western Division of the Salon Club of America is now well established. One portfolio has been completed and is making the rounds of the members, while two new portfolios are just starting. As a means of instruction in photographic art work this certainly has no equal; one places his picture in the portfolio, reads the criticisms on all other pictures and makes his own criticisms and when the completed album returns to the starting point twelve or fifteen careful examinations have been made

of each print and reasons given why it does or does not come up to the standard as established by each individual. In this manner one can see wherein his errors lie and avoid them; another learns a valuable lesson and can "go and do likewise" perhaps, while another *may* find that he has made a picture in which no fault can be found. This last class does not exist—hence I say "may find."

A Standard Gum-Bichromate Formula

J. C. S. Mummery, the well-known English worker in gum-bichromate, in a recent demonstration before the Royal Photographic Society, insisted on the use of definite formula for the coating mixture and gave the following as a standard:

	Single coating	Multiple coating
Ivory black	50 grains	40 grains
Burnt sienna	10 grains	8 grains
Gum solution 1—3		1 ounce
Potassium bichromate solution saturated		1 ounce

The colors used are the levigated powder pigments, ground with the gum solution by a muller and slab, and filtered through muslin (Swiss).

The use of fixed formulæ is not the practice of Demachy and other workers of repute, but it doubtless has its advantages especially for the beginner. Dr. Mummery advocates the use of an ordinary spray, such as artists use to fix charcoal drawings, for effecting development.

Some New Conveniences

The many new conveniences placed at the disposal of the California Camera Club members within the last few weeks are worthy of mention. The Cooper-Hewitt mercury vapor lamp which was installed to replace the arc lamp in the new bromide room finds great favor with the members using it for enlarging. The new room which has been fitted up for the washing and drying of plates, film and paper is now in full working order and proves a great convenience. The rewiring of the rooms is now completed and the occasional complaints of "no light" of the past are no longer heard. The new lenses for the lantern are giving the best of satisfaction.

Notes and Comment

The Ocular Lens

So much interest has been aroused in this new form of lens by the display made and demonstrations given at the recent Photographers' Association of California's Convention by its manufacturers that we had intended showing several reproductions of work made with this lens and calling attention to its merits and the possibilities which it placed in the hands of the photographer, in a more specific manner than a brief notice in this department will allow. The heavy demand upon our space this month prevents. Our next issue will contain the matter. Sufficient it is to say that work was shown by such men as Evanoff, Hearn, Barrows, and Hoyle of Boston, Nusbaumer of Buffalo, Goldensky of Philadelphia and others, work that demonstrated beyond a doubt the advantages possessed by this new instrument. The makers are putting forth every effort to bring this new lens before the photographers that they may try it for themselves. It is manufactured by the Scientific Lens Company, 24 and 26 East Twenty-first Street, New York. It will pay you to investigate. You may learn how some of the pleasing results that you admire in the work of others is produced.

"Figures, Facts and Formulæ"

We took occasion some months ago to call the attention of our readers to this valuable compilation into book form of a wealth of valuable information. The editing of the volume is the work of H. Snowden Ward of *The Photogram*, London. Little more need be said. We are advised by Tennant and Ward, of 287 Fourth Avenue, New York, that their exhausted supply has again been replenished. Our readers should lose no time in securing a copy. The matter is all new and entirely up to date. There is no waste of words and yet the 184 pages are well filled with only such matter as any photographer may want to consult at any moment. Price \$1.00, cloth bound; in paper, 50 cents.

"The Lens"

The same publishers have received a further supply of the latest and most comprehensively useful book on the subject, titled as above. The heavy demand for this work in England has necessitated the printing of a second edition. To quote from the catalogue after adding our own endorsement: "The aim of this book is two fold—to explain the properties of photographic lenses without the aid of mathematical formulæ, and to give practical instruction in the selection and proper use of a lens. We recommend it as emphatically the best book obtainable—for all who need reliable information about lenses of every kind and class." The book is profusely illustrated in handsome cloth binding and will be sent postpaid for \$1.25 by the American agents, Tennant & Ward, New York, or can be ordered through any dealer in photographic supplies.

Perfection in Camera Construction

The new catalogue of the Graphic and Graflex line of cameras has just come to hand. It should be in the hands of every up-to-date photographer, either amateur or professional. All the many improvements which they have incorporated for the betterment of a line always having the reputation of being well in the lead, are described. The new Tourist Graflex is listed in a variety of equipments as to lenses or will be made to fit any suitable lens the purchaser may supply. The Triple Lens Stereo Graphic is another camera that should interest those desiring perfection in this line of work. Some twenty-five different and distinct lines of cameras are listed including laboratory, naturalists', X-ray and other special types. Space does not permit a listing of all the fine goods catalogued in this well-illustrated list. The only objection that can be found to the catalogue is that it fails utterly to give an adequate idea of the fine workmanship and substantial construction of the Folmer & Schwing lines. In this, the catalogue is defective. To those already

acquainted with goods of their manufacture, this will not matter but others should seek an early opportunity to examine a camera of their make. This new catalogue will be sent upon request by the Folmer & Schwing Manufacturing Company, 407 Broome Street, New York.

The Percy King Light Controller

One of the most interesting of the new appliances shown at the recent Convention of the Photographers' Association of California was a light controller to be used between the sitter and the skylight, giving almost any degree of control. While it does not lengthen the exposure as would curtaining the light it gives the operator the power of securing any known lighting, any tone or degree of tone, without the loss of detail such as is so often the result with the lace of ladies' gowns on the light side, sitters with white hair, with bald heads, a too prominent ear on the light side and too assertive bones and cords in low neck and drapery pictures. The Scientific Lens Co. are sole agents and will be pleased to send illustrated circulars showing samples of effects secured and full details as to the extreme simplicity and practicability of the controller.

"Amateur Portraiture by Flashlight"

Just as we go to press there comes to our table one of the best and most timely little books that it has been our good fortune to read for many a long day. It is by William S. Ritch and is entitled, "Amateur Portraiture by Flashlight." It goes into the subject with a directness that is only equaled by the simplicity of the methods advanced. Diagrams and examples are given which almost make the text seem needless, but every possible detail is explained. We are told just why our results are not satisfactory and how they can be made most pleasing by the simplest means. By the time this reaches you the book will be on sale at all the kodak dealers, or ten cents sent to the Home of the Kodak at Rochester, New York, will bring it to you.

A Dainty Catalogue

The new booklet, "Be a Photographer," that has just been issued by the California College of Photography, is a most interesting and instructive piece of catalogue work. Per-

fect in typography, tasteful in arrangement and direct and to the point in its diction, it is such a book as one delights in reading from beginning to end. Besides setting forth the advantages of becoming thoroughly grounded in so pleasant and remunerative an art science as photography, it gives a clear outline of the methods pursued by the College in its instructions together with a list of terms and tuition fees. Several of the pages are made no less interesting by giving a brief account of the locality with items concerning the wonders of the Leland Stanford Junior University which is located at the same place. The catalogue will be sent on request.

A New Catalogue

We are just in receipt of the new Catalogue of Photographic Supplies issued by G. Gennert of 24 and 26 East Thirteenth Street, New York. This catalogue is not only complete in every detail but it lists many novelties that are obtainable only through this progressive firm. We have all wished quite often that certain articles that were advertised and made to appear quite popular in the English journals, were obtainable in this country. We find many of these things listed in this new catalogue. We shall certainly keep this book handy as a book of reference to be used when asked where certain articles not generally listed, can be obtained. A nominal charge of ten cents is made for the catalogue, simply to insure its being sent for for other than a gratification of one's curiosity. It costs much more than the modest price to print and mail.

Mounting Thick Papers

When mounting the thicker varieties of gaslight and bromide papers one is often apt to find some difficulty in getting the prints, more especially at the edges, to adhere without using a very considerable amount of pressure. This may be easily overcome, however, by first mounting the print on a thin piece of brown or dark colored paper. To this, by reason of its surface, the print will very readily stick. A narrow margin may be left that, when trimmed down to a suitable width, will greatly enhance the general appearance when the print is placed in position on its mount.—E. H. C. in *English Amateur Photographer*.

CAMERA CRAFT



San Francisco, California

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CAMERA CRAFT PUBLISHING COMPANY
114 GEARY STREET SAN FRANCISCO, CAL.



"Nydia"

by WILL H. WALKER
PORTLAND, ORE.



VOL. X.

SAN FRANCISCO, CALIFORNIA, JANUARY, 1905

No. 1

Solar Printing

By BERNARD C. ROLOFF

Pursuant to repeated requests and numerous questions upon the subject of Solar Printing and Solar Enlarging from various sources, I give the following description of an apparatus which is eminently fitted for this work and can be built at a nominal expense by any amateur. This device should also attract those interested in a home-made enlarging apparatus for daylight use, to which it can be readily adapted with but few changes.

In order to make the title clear to those who do not understand the term; by solar printing is understood a somewhat obsolete, yet extremely fascinating process or method of obtaining enlargements directly upon some form of printing-out paper from a negative by projecting the direct rays of the sun through the latter. In the old days these enlargements were made upon home sensitized, plain, salted, or albumen papers, while at the present time we have papers like Solio, Aristo, Platinum, Self-Toning and others which very readily lend themselves to the process.

To come without further preface to the apparatus employed in the process: In solar-printing establishments, large, entirely enclosed cameras were used which were placed on the roof or upper story of a building where it was possible, by swinging the entire apparatus, to follow the sun despite its diurnal motion. These solar cameras, as they were termed, were adapted to follow the sun across the heavens by means of what is known as a heliostat. Such a device, while quite feasible, would be a little beyond the means of most amateurs, so I have evolved the device shown in the accompanying sketches, which will serve the purpose as well and can be placed in an ordinary window, which must, however, necessarily have a southern exposure.

Referring to Figure 2 of the sketches, A represents a strong frame of one-inch wood that will exactly fit the lower half of the window when the sash is thrown up; and in the middle of this is fitted an upright board B about two feet wide which should have a hole cut in its center ten inches square. The size of this hole is regulated by the outside dimensions of your camera. I have taken as an example, the most common camera in use, viz: an ordinary 5 x 7 reversible back Premo or Poco, the back of which measures from eight and three quarters to nine

inches, square. For other cameras it is only necessary to make this opening smaller and the rest will follow. Fasten this center board strongly in place with nails or screws driven well into the wood. The open spaces *c* are to be closed by several thicknesses of brown paper pasted or tacked across the inside of the frame. The upper part of the window must also be closed, so that no ray of light shall enter the room except through the hole in *B*. At this point it may be well to advise that a part of the work consists in cutting a number of circular holes, therefore a scroll-saw will be found very useful. However, the boards having circular holes may be ordered from any saw or planing mill, already cut, at a nominal price. The slot *k* in board *B*, Figure 1, should be cut with a scroll-saw.

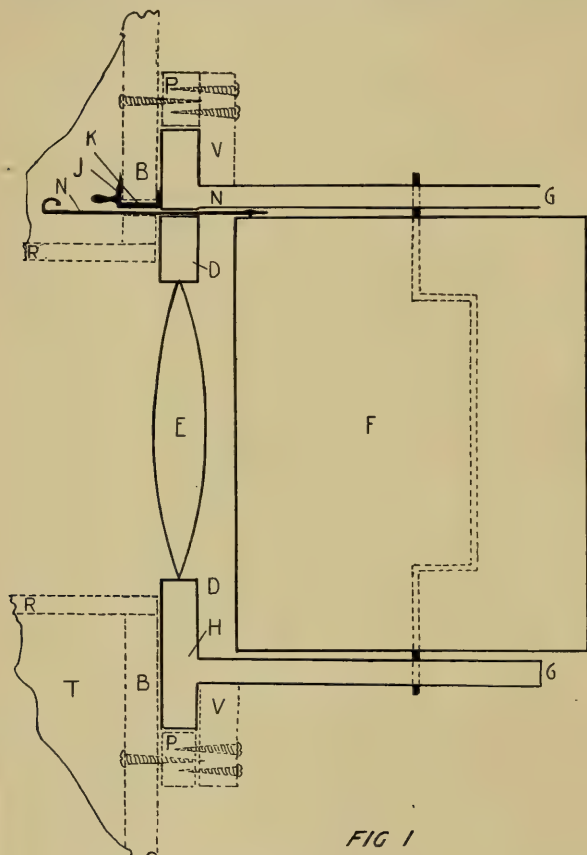


FIG. 1

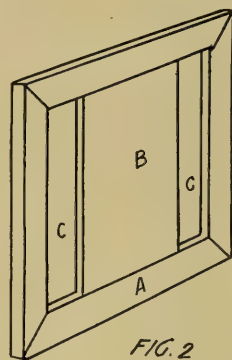


FIG. 2

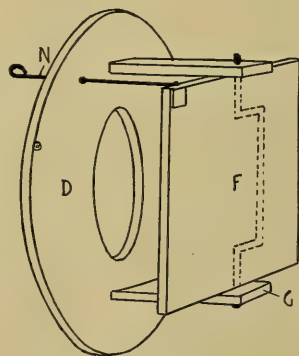


FIG. 3

In Figure 3 we have a disk of one-inch wood seventeen inches in diameter, with an opening in the center eight inches across, to hold the condensing lens. *F* is a mirror eight inches wide and twelve inches long, turning on an axis which passes through the supports *G, G*; the latter being attached to the disk *D* as best shown in Figure 1. These supports should be long enough to admit of the mirror turning entirely around without touching the disk, and are fastened in place by screws passing through the disk and into their ends. It may be better to gouge out two square holes in the disk as shown at *H, H*, Figure 4, into which the supports are forced, to enable them to bear better the weight of the mirror. The manner of attaching the pivots to the mirror is as follows: The back is first covered with paper to prevent it being scratched, then a piece of wire is bent and laid

in place as shown in Figures 1 and 3, and lastly, a piece of very strong paper is pasted over the wire and entire back, and caught down over the edge in front forming a narrow frame to the glass. The ends of the wire should pass through rather small holes in the supports G, G, so that it will not easily turn out of position. If possible, I should advise buying a small mirror in a wooden frame (the size not being of importance, except that it be large enough), and the work of pivoting the same between the supports will then become an easy matter.

A handle must be provided on the inside of the disk to permit of operating the same from inside the room. This may consist of a piece of heavy brass, at least an eighth of an inch thick and of the shape shown at J, Figure 1. A small recess may be cut into the disk D at this point so that the inner bent portion of the brass handle may lie flush with the surface of the disk and one or more screws should be run through the brass into the disk to hold it in place.

Though not shown, one screw may be run into the upper support G. This handle J is run through a slot K cut in the board B, on an arc of a circle twelve and one-half inches in diameter before being bent to shape. It is then bent up to form an indicator as shown in Figures 1 and 4, and may be doubled back to form a handle as shown. A graduated scale L, Figure 1 may be marked on board D, if desired, so that the mirror can be returned to a certain position at any time. At one corner of the mirror M, Figures 1 and 3, a small block of wood about an inch and a half long and half an inch thick should be securely glued.

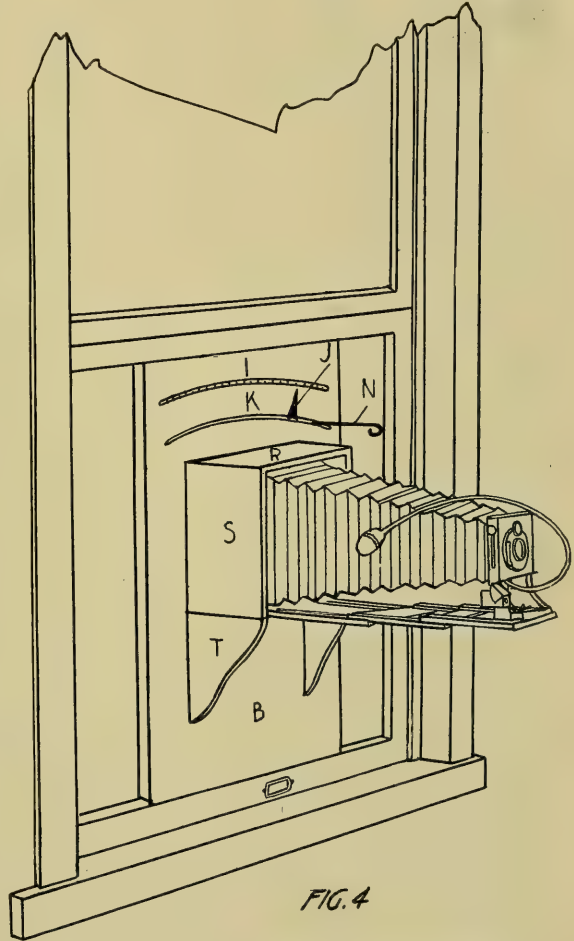


FIG. 4

If a wood-framed mirror is used this block may be dispensed with for obvious reasons. A wire handle N is bent at this end so as to hold a small screw O by which the wire is pivoted to the block. This wire is then also run through the slot K and bent at its outer end to form a handle by which the mirror may be moved on its pivots. Thus we have the mirror moving in two directions which enables us to follow the course of the sun and throw a direct beam of sunlight through the condensing lens onto the negative.

Next take two pieces of wood one inch thick, and twenty inches square; in the center of one cut a hole seventeen inches in diameter, while in the other cut a



GATHERING WILD FLOWERS

BY LOUIS FLECKENSTEIN

hole only fourteen inches in diameter. These pieces are shown in Figure 1, *p* and *v* respectively. Now, referring to Figure 1 which is a section of the instrument, *b* is the central board which has the square hole in it; *p* is the piece you have just made with the hole seventeen inches in diameter and *v* the other piece with the hole fourteen inches in diameter. *d* is the large disk shown in Figure 3 which you remember is just seventeen inches in diameter and consequently will exactly fit the opening in *p*. If these edges are rough, sandpaper them with a coarse quality of sandpaper first, finishing them off with a finer kind. When *d* is in position and moves easily, but not too loosely, in *p*, place *v* over it and fasten it in place with screws passing through *q* into *p*, but *p* must, of course, be first strongly screwed upon the board *b*.

You will now see, that by turning the handle or indicator *j*, the position of the mirror which is fastened to this disk can be easily changed so that it shall face in any direction, while by drawing the wire *n* it can be swung so as to reflect the sun's rays through the lens from whatever quarter of the heavens it may be shining. This double adjustment of mirror and lens enables you to throw the rays of the sun through the opening, in upon the negative, at any hour of the day. As the mirror is adjusted in Figure 1 the sun must be very low, as its rays to strike the mirror would necessarily be nearly horizontal. The condensing lens should be an eight-inch convex lens of about twelve-inch focus. It will cost about \$5.00 new but can be had a great deal cheaper from second-hand stores. This size will cover enough of a 5 x 7 plate to be very serviceable, for a 4 x 5 a six-inch lens of ten-inch focus would do very well. The outer end of the instrument being now completed, we will turn our attention to the inner part. Cut two half-inch boards to a size of about 10 x 7 inches. These are shown at *r, r*, in Figures 1 and 4. Also cut two similar boards of the same length but nine inches wide, shown at *s, s*, Figure 4. This forms the inside housing for the camera when screwed, glued, or nailed in place. A pair of brackets *t, t*, should be placed under the housing to support the same more securely when a heavy camera is being held in position.

The instrument is now completed and to use it it is only necessary to place a camera in the housing, being careful to see that no light creeps through alongside the camera. It may be well to glue a narrow strip of velvet plush, or like material, on the inside of the housing all around, both to prevent this escape of light and protect the leather covering of the camera from injury when moving it in and out of the housing. The old rule for solar enlarging was, that the lens of the camera, that is, the projecting lens, should be at the principal focal point of the condenser. If this be twelve inches then the camera lens should be racked out until it is just this distance from the condensing lens. For this reason the lens in old forms of boxes used to be fixed in place, and arrangements made to move the negative back and forth between the projecting and condensing lens. However, the arrangement given herewith allows of movement of both projecting lens and negative, as the reversible back of the camera should be removed and the negative placed at this point and held in place with thumb-tacks or other means. An easel or stand should be provided upon which the sensitive paper can be pinned and this should be made so that it can be easily moved back and forth to get the proper size of enlargement. For this purpose I have found that a bench or a cheap pine kitchen table will answer. Upon this I have a shallow dry

goods box sliding in grooves, made by nailing cleats on the table top. I have my table exactly parallel with the camera and so avoid getting one side of the picture sharp while the other side is out of focus, as often happens when an easel is used to hold the sensitive paper.

It is thought that the manipulation of the device is now thoroughly understood, so a few words as to handling the paper will not come amiss. With such paper as Solio attached to the screen, the image gradually appears, and it requires time, which may extend from fifteen minutes to an hour or more, to reach full strength. Meanwhile, the mirror must be regulated from time to time as the sun declines to the horizon to keep the direct rays always shining through the lens. This slow printing, requiring as it does incessant attention to keep the apparatus duly placed as respects the sun, is very objectionable and annoying, and therefore leads to the extensive use of development to shorten the time. As to development of Solio and Aristo papers, this is very simple. Make a solution of metol, thirty grains; citric acid, sixty grains, and water ten ounces. Print until the image is just visible and develop with the above and very fine results will be obtained. Before immersing the sheet in this developer, a few small strips of any printing-out paper should be placed in the solution, as it works best after a little free silver has entered it. It develops slowly at first until the print is of fair strength, when it gains rapidly. The prints should be very quickly and thoroughly washed after development and may be toned or simply fixed, beautiful tones resulting in either case. Many other formulæ for developing printing-out paper have been given in the photographic magazines from time to time, so it is not necessary to go any deeper into that part of the operation at this time.

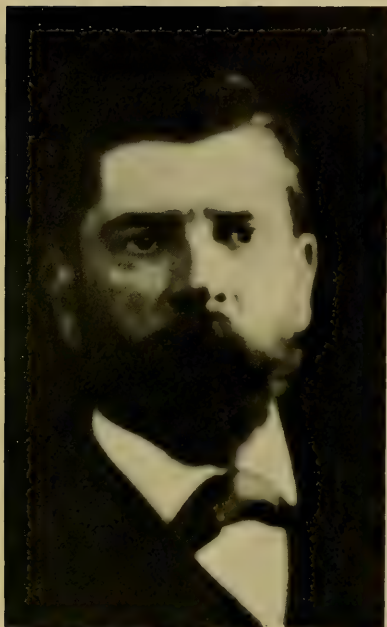
The advantage of making enlargements by this process is that to some amateurs the seeming difficulties of enlarging on Bromide paper, with its extreme sensitiveness and consequent careful handling, is a great drawback. With this method they are handling papers with which nearly all amateurs are familiar, although used in a new manner, while at the same time the exposure is not a guess but its completion may be easily determined. Another way of using printing-out paper for daylight enlarging and then developing it, is to first soak the paper in a ten per cent solution of bromide of potassium for a few minutes and then wash it for a further fifteen minutes. This converts the sensitive salts into bromide of silver, making it more sensitive. While the same developer is used as for Bromide paper, the exposure will be found about five times as long as with the ready prepared Bromide papers. In order to prepare the above apparatus for regular bromide enlarging it is only necessary to remove the mirror, and in its place put a sheet of white bristol-board which is kept fixed at an inclination of forty-five degrees to the camera so as to use unobstructed light from the sky, but at the same time avoiding all direct sunlight. The camera should be pushed back so that the negative comes within half an inch of the condensing lens.

In a later issue a description of a solar microscopic attachment for this device, by the aid of which microscopic objects of the usual type may be enlarged directly upon sensitive plates or printing-out paper, will be given. In this connection it may be well to state that the device may also be transformed into a magic lantern using solar light as the illuminant. Any one of ordinary ability can easily make this device, but if successful results are not forthcoming, the Author will cheerfully answer inquiries sent him in care of the Editor.



Telephotography with a Pinhole

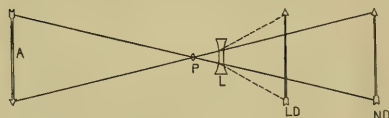
By DR. H. D'ARCY POWER



MADE WITH PINHOLE AND MINUS LENS

To take a photograph with an apparatus in which the only lens employed is a minus one may at first sight appear an impossibility, but the accompanying illustrations demonstrate the opposite. It is now some two years since I described in *CAMERA CRAFT* my method of timing stenopaic exposures, and in the same series of papers laid stress on the special applicability of the pinhole to work of large size. Experience has amply confirmed what I then wrote in both particulars, and so far as exposure is concerned my stenopaic negatives show more uniformly correct timing than my lens work. In the matter of large negatives I have met with a difficulty that has given me much trouble, and to which I am now able to offer a solution. It is this: If a narrow angle view (and most pictorial work is of this class) be taken on a large plate, say 14x11, it involves a long extension of a large camera and a proportionately long exposure. On a woodland

subject this might be half an hour or more. The question of time is merely one of personal convenience, and to the serious worker is not of consequence; but a large camera extended 20 or 30 inches is liable to movement in various ways, both by tremor and displacement; and more than once I have suffered the annoyance of losing a large plate, a morning's work and an opportunity in this manner. Could I obtain the same size and angle at half the bellow's extension the probability of movement would practically disappear. I have little special knowledge of optics, but it occurred to me that if the image formed by a pinhole were passed through a minus lens the rays would necessarily suffer outward deflection and the image be correspondingly enlarged without extension of the camera or would attain the same at a less extension. The idea is illustrated by



the accompanying drawing where the image of the arrow A projected through the pinhole P would normally form a picture of the same

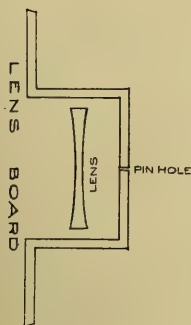


MADE WITH
PINHOLE ONLY

all be calculated, but I prefer to determine it by experiment. I put a contact transparency of a negative of myself in my daylight enlarging apparatus and substituted my set of pinholes for the lens. Using No. 1 pinhole, which is one millimeter in diameter, I got a well-defined image measuring from the hair-line to point of shirt-front 4 inches. Now placing a ten diopter minus lens half an inch behind the pinhole the image on the screen immediately increased in size to 5 inches; on moving the lens farther back the image grew in size to seven and a half inches; beyond this I could not go as the shadow of the lens was thrown across the image and spoiled it. I then tried stronger lenses with the result shown in the following table:

Strength of lens	Size of pinhole image 4 inches	Size of pinhole image and lens $\frac{1}{2}$ inch behind hole	Size of pinhole image and lens 2 inches behind hole
10 D	4 inches	5 inches	$7\frac{1}{2}$ inches
16 D	4 "	$5\frac{1}{4}$ "	$8\frac{1}{4}$ "
20 D	4 "	6 "	10. "

To bring the matter to a practical test I put a Seed's No. 26 plate on the easel and gave 10 seconds' exposure, using a No. 3 pinhole (0.5 mm.). I then made another exposure with the 10 diopter lens one inch behind the hole, giving 40 seconds' exposure. A second experiment was made with a No. 4 pinhole (0.37 mm.) at exposures of 20 and 80 seconds. Prints from these negatives are enclosed and except for the sharper definition of the one made with the smaller pinhole they are alike and demonstrate that by placing a minus lens behind a pinhole the image may be magnified without altering the length of the bellows. In other words, the principles of telephotography are applicable to the pinhole as well as the lens. In my experiments I used an ordinary spectacle lens, and I noticed (what is not apparent in the enlarged head) that the image on the edges of the transparency plates showed inward curving, in fact the usual pincushioning distortion of a single lens. This could doubtless be corrected in the usual manner, if found undesirable. To make practical use of this telephotic power in the field demands a contrivance whereby the minus lens can be moved behind the pinhole. I would suggest the use of an ordinary telephoto mount; the barrel being short and the minus lens so arranged as to be capable of being adjusted at any distance ranging from immediately behind to two inches in the rear of the pinhole. This with a 16 D lens would double the size of the image. Any one desiring a more simple, but not so convenient an arrangement can mount the lens in a slot at the bottom of a small box having the pinhole in front and opening into the lens board behind as suggested by the accompanying illustration.



I shall experiment further along the lines here laid down and expect to have more to say at some future time. Evidently we have here not only an optical novelty but a means of increasing the efficiency of the pinhole in narrow angle work. The method does not seem to offer any gain in illumination, but the gain in stability is both great and important.



From exhibit of
E. W. MOORE, Portland, Ore.,
Fourth P. N. W. Convention.

The Scientific Basis of Artistic Mounting

By JOHN BARTLETT

Why do we mount and frame our photographic pictures? Why are we loath to send them forth to the exhibition shorn of their artistic card-setting? Why do we "grunt and sweat under a weary life" to match some appropriate tint to the prevailing tone of the print? Is it merely to isolate the picture from its surroundings? Is the only service of the mount and frame a negative one, not to interfere with the effect *per se* of the picture?

I think a little reflection will convince you that there is no neutral ground in the action of accessories, and I may venture to say, without encountering contradiction, that if the mount and frame do not enhance the good qualities of the photograph, they do positive injury by their incongruous presence. Prevailing fashion is apt to control taste, and a particular variety of mount, in itself modest and unassuming or even charming, is made to do service for all kinds and conditions of prints, where its modesty becomes at times too self-asserting or its charm too predominant, so that the beauty of the photograph is eclipsed or its excellence marred or totally nullified.

It is an excellent thing to have intuitive taste in selection, and comforting when in doubt to refer to it; but it would be more edifying to us who have not the inborn talent could the possessors give some reason for the faith which is within them, to guide in the valley of indecision. While the artist, who busies himself in the choice of a mount may abandon himself with tolerable success to his individual feeling in the treatment of color, it is safer to know the laws of the phenomena of contrast of color. It is a shorter path to the goal and will lessen the trials on the road. No attempt, as far as I know, has hitherto been made to apply practically the theory of color to the selection of appropriate mount.

While I am sensible of my inability to pass judgment in any particular case, or to gainsay the judgment of those who have established the canons of taste, I am nevertheless fully convinced that the discovery of some of my own errors, though made too late to be of much benefit to myself, may possibly be of use to those whose habits are not so formed but that they may be abandoned if proved to be wrong. Every one knows of what value to the painter is the knowledge of simultaneous contrast of color. To the photographer it is almost as important. He too must know the effect produced by the juxtaposition of light and shade, in order to produce certain esthetic effects.

Let us, at the start, acquaint ourselves with the simplest experiments bearing on the subject:

EXPERIMENT I

Lay a small white disk, say a white wafer upon a black ground, look steadily at it for fifteen seconds or more and then turn your eyes to another surface which is gray in color and uniformly illuminated; you will notice on the gray background a dark image of the form and size of the white wafer.

EXPERIMENT II

Now in place of a white wafer substitute a colored one, impress its image on your vision and then transfer your view to the gray ground; you will see an image but differently colored from the original. Its color will be what is called the complementary of the original. If the original be red the after-image will be bluish green. If it be yellow the after-image will be blue and so on for other colors.

EXPERIMENT III

If after having fixed your eye upon an object for a sufficient length of time you look upon a surface of the same color as the object the after-image will appear faint and whitish.

EXPERIMENT IV

If the surface looked upon is of the complementary color to that of the object the after-image will appear deeper and more brilliant than the rest of the surface.

We are not treating the topic psychologically and shall not enter into a discussion of the reason why, but shall confine our remarks to the practical application of the principle. Bright and full colors, positive colors (like ultramarine or scarlet) are seldom if ever made use of in photographic mounting, and consequently the successive contrast plays but a subordinate part. The examples are however well fitted to serve as an introduction to the study for our particular purpose here. The contrast between "light" and "dark," which being the simplest case (Experiment I above), is the first to claim our attention.

Let us place a given hue, say a medium gray, upon two different grounds, the one lighter, the other darker than the superimposed piece, the appearance will be strikingly different in each case. Upon the lighter ground it will look much darker, while upon the ground darker than itself it will seem much lighter in tone. This experiment may be very easily made by cutting out two pieces of moderate size from the same sheet of mounting paper and then placing one of them upon a lighter, the other upon a darker ground. It is really hard to realize that both pieces are from the same sheet of card, in fact one is only convinced by placing them side by side upon the same ground. The same phenomenon may

be observed in the following arrangement. We have placed ten small disks of exactly the same tint of gray upon a larger disk divided into gradated segments from white to almost black. It will be noticed that one half of these small disks appear considerably lighter than the other half, but to prove that all the disks are identical, cover up the ground with a piece of white paper, in which apertures are cut corresponding to the positions of the small disks on the large one. Another unexpected revelation is this, the disk, the true brightness of which exceeds that of



the ground on which it is placed only by a very slight difference, looks almost as bright upon the perfectly black sector, while in the same manner a disk upon a ground only slightly brighter looks almost as dark as the one upon the perfectly white ground. It will therefore be manifest that the small disks have suffered a change of brightness by contrast with the ground, and that the smallest perceivable difference in brightness between the two surfaces produces almost the same effect of contrast as that produced by the greatest contrast which can be conceived.

We beg pardon for entering so much into detail, but you appreciate we are confident of the importance to our subject of the application of this remarkable law of effectiveness of small differences. We promised not to inflict on you any physiological or psychological investigations but we must for the sake of clearness interpolate a word or two.

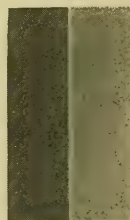
All our knowledge is relative, that is, we know things in themselves only by their relation to things in general. So the terms light and dark are only relative ideas, like great and small, hard and soft, heavy and light, quick and slow, etc. All these ideas are based upon comparisons with some object accepted as a standard for the class; and so the light of one object may be comparatively dark when placed in relation with the light of another object. Thus an object



A



B



A1

B1

appears light to us if placed near a dark object suitable for comparison, but we take the same object to be dark when juxtaposed to a light one.

Our judgment in regard to similarity or dissimilarity in brightness is all the more certain the nearer the two surfaces to be compared are placed to each other, and the greatest degree of certainty is reached when the two surfaces touch directly.

The two surfaces A and A¹ are shaded exactly alike, the same is true of B and B¹. But while it is difficult to estimate the difference in brightness between A and B the difference is quite apparent between A¹ and B¹. Another unexpected peculiarity is discoverable by this juxtaposing of the two shades, which will at once show the value of the application of the phenomenon to the practice of mounting photographs.

Each of the two surfaces touching each other looks as if it were shaded off toward one side, while in reality each is covered with a perfectly even tint. Furthermore, the brighter surface appears to increase in brightness, the darker one in darkness toward the boundary line. It follows that the effect of contrast is strongest at this line. This peculiar effect, due perhaps to fluctuation of judgment on the part of the observer, shows us why the photographer has recourse to the method of double mounting or matting his print, that is, surrounding the print first with a narrow border of one tint and then superimposing the whole on a



RACING FOR THE HARBOR

BY THOMAS A. MORGAN

larger surface of a different shade. The photographer may fortunately hit upon the right combination, but he may know nothing of the general principle involved, and therefore we again urge the importance of our attempt to fix mounting on something of a scientific basis.

When we carry in ourselves no standard by which to measure saturation of color, or its exact place in the chromatic scale, we are easily deceived and so greatly perplexed. Let us give a few experiments to guide in selection. A slip of paper of a pale but very decided blue-green (like some of the tones employed in gum-bichromate or carbon printing), when placed upon a sheet of paper or a mount of the same general tint, but somewhat darker and more intense, will have the appearance of gray, and by no effort of the imagination or good sense or reason can it be made to look otherwise, because the imagination or reason or judgment has nothing in the field of view of an undoubted pure gray wherewith to make comparison, and in point of fact the blue slip or blue gum print actually approaches a pure gray more nearly than the larger mount surface on which it is placed. But let us go a step further and bring into the field a slip of gray paper and note the effect it will have on our original slip. Our judgment is again surprised by the unexpected. Instead of serving as a standard to correct the illusion of the first phenomenon it assumes at once the appearance of a reddish gray. The pure gray really did approach reddish gray more than the field of greenish blue surrounding it.

Now let us place a pale blue-green slip on a pale reddish ground like some of the artistic photo-mounts. We shall notice that it has assumed a stronger blue-green hue than when placed on a white mount. That is, the original tone has been intensified. It would be impracticable to separately consider all the effects of various hues in juxtaposition, and we shall merely touch upon the method for observation.

Place a strip of gray paper upon a mount of green (decided hue) and we shall find that no perceptible change takes place in the gray (unless the observer stares for some time at the combination), but note the difference in the effect when we place a thin piece of tissue-paper (white) over the whole. It will seem that the gray slip has been converted into a piece of pale purple. Now of what value is the knowledge acquired by this experiment to the photographer? It shows him that the contrast produced by strong saturated tints is much feebler than with tints which are pale. When we place the white tissue over the positive green sheet we weaken or dilute the color and at once modify the gray. So when the photographer takes a platinum print or a bromide of silver print and mounts it upon a bright green mount (which of course he does not do), he perceives little if any change in the gray tones of the photograph, but when he substitutes for the decided green mount a pale green one he begins to see a marked change in the tones of his picture; sufficient perhaps to injure its artistic value, or on the other hand, to increase the effect desired. The gray and its various gradations down to positive black would assume more or less of a purplish tint.

On trying the effects of other colors on the gray you will find that it assumes on light red (diluted color), blue-green; on pale yellow (Indian tint), blue cast; on light blue, yellow-brown; on violet (pale), yellow-green; and on purple (pale), green. Of course these colorations are very slight and are only perceptible with daylight (white light) illumination, but they materially affect the tone of the picture. In every case the contrast is weaker if the gray be much lighter or darker

than the ground on which it is placed. The practical deduction from these facts is that: white, gray, and black are more affected by pale tints (photo-mount tints) than by intense colors, and the effect of contrast is stronger with green, blue, and violet than with red, orange or yellow. Stronger with the so-called cold tints than with the warm.

All that has been said with regard to the contrasts of white, black and gray is applicable with slight modifications to any single color taken by itself; we mean photographs in monochrome. It should be borne in mind that every color is capable of exhibiting two kinds of contrast, viz., that involved by competition with other colors and that of mere light and shade. To summarize briefly, we find that reddish tones on a white ground appear darker and rather more intense; on dark gray or black (carbon) they become tinted orange-red and are made more luminous; dark dull red on a white ground may be mistaken for brown; on a black ground it becomes redder; green on a white ground looks deeper and richer; on a black ground somewhat paler; by contrast the mount is made to assume a rusty appearance and the green suffers; cyan blue on white ground is intensified and takes on a greenish tinge; it preserves its blue tone better on a dark mount; blue on white appears dark and rich but shows no tendency to green; on black by contrast its luminousness and intensity are increased.

The shades of gray have always been popular for mounting prints. It is a safe color to employ when in doubt. It seems that the complementary tints furnished by pure gray react on and strengthen the colors which call them forth, especially when the tints are pale (as is the case with photo tints in general). In conclusion, we have a word to say about the effect of the mount upon the photograph itself. Not only is the character of the tone of the picture changed but also the presentation of the aerial perspective. For instance, in a photographic landscape the distant mountains may be rendered much lighter or darker in tone by the character of the mount. The distance may be made to approach or recede. We shall not enter into a discussion of the cause, but merely say that even from the effect of successive contrast the outer parts of the bright surface must appear brighter than the rest.

If for instance, a light of perfectly neutral gray of a distant mountain range in a landscape be brought into juxtaposition with the margin of a white mount it loses all appearance of translucency and becomes flat, but in relation with a margin of a pale yellow (Indian tint) it gains in effect by a delicate blue ether-like appearance so that by a skilful employment of contrast, a photograph may often be made to appear luminous or brilliant. The whole subject of mounting photographs deserves an inductive method of analysis and the writer hopes that his imperfect attempt to put it within the range of scientific treatment may stimulate experiments toward the rationale of artistic mounting and thereby aid the photographer in search of pictorial effect.

What I mean by art is some creation of man which appeals to his emotions and his intellect by means of his senses. All the greater arts appeal directly to that intricate combination of intuitive perceptions, feelings, experiences and memory which is called imagination.

WILLIAM MORRIS.

The Eastman Sepia Paper

By WALTER ZIMMERMAN

The result of my own experience is that the Sepia paper of the Eastman Company is the most useful of all photographic papers. Nevertheless, it seems, generally, to be far less appreciated than it deserves to be. There are two reasons for this. First, it is very cheap, and, while the makers are far too businesslike to let such a suggestion affect their action, the public is apt to think that, because a paper is cheap, it is therefore less desirable than the expensive kind. The other, and more important reason is that there are very few, even among expert photographers, who know how to use it in such a way as to obtain the best results. It is for those who want perfect prints that this treatise is intended. Let me start out with the assurance that if the suggestions and directions which I am about to make are implicitly carried out, such results will be obtained as will put this paper in the highest place among all who appreciate artistic effects in photography.

The stock used is heavy and strong, of a buff tint. The sensitive coating is laid directly on the paper, as with platinotype papers. It therefore dries quickly, and there being no collodion or gelatine, there is no possibility of the prints sticking together. They also dry out nearly flat. When entirely dry they should be placed under some light weight, such as a book, after which they will always remain flat. The surface is soft, or "matt," and, for portrait work, much less retouching is needed than with the glossy, gelatine-coated papers. The paper is also exceptional in that no matter how contrasty the negative may be, there is no "bronzing" in the shadows under any circumstances. The color of a properly finished print is a dark reddish brown, and not at all the sepia of the cuttlefish or squid. The color is so pleasing that, in my studio work, I find that the Sepia paper is selected for portraits in nine cases out of ten as compared with platinotype papers. In addition to portraiture, the Sepia paper is particularly suited, owing to its fine color and its broad effects, to exhibition and salon work. Nearly all of the prints which I have exhibited at salons in this country and abroad, during the last two years, have been made with this paper. Since all of my modifications for exhibition work are made on the negative, there is no occasion to use any of the special processes, such as the gum-bichromate, in which the modifications are made on the prints. All prints from the same negative can be made precisely alike, as the result of timing the first prints accurately, while printing, and, the weather conditions being the same, it follows that uniformity of work can be maintained as in no other way. For prints to be made later, the time of each negative should be marked on the margin. The question as to permanency is most important with all photographic papers, and, with the Sepia paper, opinions appear to have differed. It is no reflection against the paper to make this necessary statement. Prints which have been exposed to the daylight for two years have never, in any instance, changed a particle, *except* when made differently from the method which will be here explained. It seems to be a presumptuous thing to say that the directions of the maker of the paper are incorrect, but my prints and those of others, carefully made according to those directions, have unquestionably changed, with or without action of the light, after keeping for a few months. This statement is an important one, for the reasons



From exhibit of
SUE DORRIS, Eugene, Ore.,
Fourth P. N. W. Convention.

that photographers visiting me have frequently remarked that the prints which they had made on this paper had proved to be unstable, and my own results were shown in proof of absolute permanency. After explaining the method which I am now advocating, I have never heard of any complaints, except only in cases where others "knew a little better," and were unwilling to act precisely as advised. It must not be supposed that this means that the process is either complicated or difficult. On the contrary, it is so simple as to seem to be too easy to be good. The cause of the difference in the results is not apparent unless it be that the more complete saturation of the hypo by the old method causes subsequent deterioration of the very delicate chemicals.

The coating of the paper is a secret of the manufacturers, but the composition, in general, appears to be of silver and iron salts, principally the latter, with possibly some admixture of bichromate of potash. A good many analytic photographers have tried to make the coating for themselves, but have never succeeded in obtaining the "just as good" results which justify them in doing their own sensitizing. The paper is sold in only one grade, as just described. Recently, the stock was changed from a rougher and heavier kind, which several of us liked better. The Company is so ready in meeting the wants of its customers, that I wish it would furnish both rough and smooth grades, and perhaps, also, white paper as well as buff.

It is a very singular thing that, while there are articles by the score, relating to gaslight, bromide, platinum, printing-out and other papers, there does not appear to have been at any time a careful treatise relating to the method of handling the Eastman Sepia paper, so that these paragraphs will, the writer hopes, serve a useful purpose.

Right here it should be noted that the paper is somewhat limited in its use, where the finest results are demanded, for the very broadness of the effect which it gives makes it much less useful than gaslight or printing-out papers in cases where extreme detail is required. It is also unsuited for uniformly thin or flat negatives, although the directions which follow will give the best method to be employed with these negatives, as well as with the contrasty kind, for which the paper is eminently suited. As in all kinds of photographic work, there is the right kind of plate and the right kind of printing paper for every effect or result that it is desired to produce. This Sepia paper then, let it be said once more, is the ideal for strong negatives, and for large objects, rather than many small objects and for great detail. For these reasons, it can hardly be surpassed for portraiture and for large genre and landscape studies. The directions which accompany the paper are, to print for a very light image, wash immediately, tone for *five minutes or more*, with very weak hypo, wash again, and dry. They say that short toning produces red tones and long toning brown tones. This has caused many expert photographers to leave the prints in the weak hypo for fifteen or twenty minutes, and it is these who complain of lack of permanency. They argue that the longer the fixing the greater the permanency, but the results are quite to the contrary.

By my method (which I shall call the new method), the toner-fixer is made a little stronger, and the prints are removed from the bath *the moment* when the color has been completely and uniformly changed. Of course, this method is radically different, notwithstanding the fact that the chemicals remain the same. It is based upon the theory that the chemical change is effected instantly, and that

further chemical action is detrimental, rather than advantageous. This paper in many other respects breaks all of the old rules as to printing papers, as careful comparison will show. All of the directions here given will, of course, be based upon the *new* method, the old one having been merely quoted for comparison as to the principal difference. A great deal of the success to be obtained by the use of this paper depends upon the method of using it in the printing. It is unusually affected by the temperature at the *time of printing*, as well as by that of the water used in washing and of the toning-fixing bath. If printed in hot sunlight, on a hot day, the results are rarely good. The heat of the sun, if great, seems to impair the quality of the paper intended to be unaffected by the light, and the result is that muddy prints are so obtained. The remedy for this is to use tissue-paper in the printing window, at a little distance from the printing frame, when the day is hot and the sunlight strong. Cool and cold weather prints, except for this precaution, give the best results.

There is opportunity for a great deal of skill in using this paper for printing from different kinds of negatives. With the average good negative, print for a fairly defined image in the medium lights, orange in the shadows (which may be seen through the glass without opening the printing frame), and a hardly perceptible change in the high lights. For dense and contrasty negatives, print for a full image, in colors ranging from orange to yellow, the shadows being almost disregarded, the printing being for the faces and high lights. A great change is required in the method of printing from a very thin negative, particularly when it has great detail. With such a negative, print for an almost imperceptible image for the best results. This suggestion will save a considerable loss of paper, and enable the photographer to use it for negatives which he has believed to be impossible for the Sepia paper. On the other hand, when there is a negative which is so harsh that it is difficult to print with it on any kind of paper, try the Sepia paper in the following away. Print for a full image, even when there are high lights which, apparently, *will not* print. Disregard the rule, an important one otherwise, as to immediate washing, and leave the print, negative and printing frame together in the room over-night. The bichromate of potash (if it is bichromate) in the paper keeps on printing; or rather, the chemical action continues, and a comparatively soft print results when washed and toned the next day. This is the same effect that is noticed with gum-bichromate printing and clearing.

The next absolute rule, with the only exception just stated, is to wash the print *instantly*. Many a photographer has printed a lot of pictures on this paper, and after an hour or two, particularly in hot weather, has found that everything was spoiled, and the blame is laid on the paper. The rule is an essential one, where good, clear prints are expected. The paper is so very easy to manipulate that the photographer can afford to step to the washing tray at once, or else to have a pail of absolutely clean water by the printing window. The hands must, of course, be perfectly dry when the next piece of fresh paper is used, as it will show every spot of water or grease and every trace of hypo from fingers or tray. The use of water should be liberal, the tray large and the flow of water continuous. If a bucket is temporarily used on account of the washroom being at a distance, a thorough washing should be given afterward. Absolute cleanliness must be observed in washing and handling this paper. This means fingers, trays, rubber, everything which might come in contact with the sensitized surface. Spots are from fingers and streaks

are from trays. To keep fingers off, absolutely, until the final process, is the best rule of all. The time for thorough washing to remove all trace of salts unaffected by the light is ten minutes or more in running water. There is still another caution needed in regard to the washing process. The print must be dipped, not splashed. With a clean tray, filled with clean water, slide the print in, uniformly and quickly, and do not pour the water over the print, as is best with nearly all other papers. Splashing will make many and ugly stains, every drop a spot. Remove the print from a first tray to a second, in which a good many prints may remain, in running water, until you are ready to tone and fix. There should be no obstruction from other prints to the quick immersion of the next. Be careful in regard to rubber tubing from the spigot to the washing tray. The tubing contains sulphur, which produces dark patches, and it should, therefore, rest on the edge of the tray.

All of these suggestions as to the most perfect method of using this paper do not mean nor imply that it is at all difficult to use, quite the contrary. There is a right way and a wrong way, and this paper, being unusually sensitive, chemically, it should be treated properly or let alone. There will be no danger in accumulating a good many prints in the washing tray. If the tray is big enough a large morning's work may remain there, provided that there is plenty of water, and that the prints may move around and not stick together. The two essentials are absolute chemical cleanliness and thorough washing. Now whether you are an amateur who has made one or two prints, or a professional, who has made a large number, make your washing and your toning-fixing two different processes, so that you will not under any circumstances carry over a trace of hypo from one bath to the next. The next thing to prepare is the toning and fixing bath, and it is the simplest thing possible. For your stock solution, from a pint to a gallon, the proportion is this: one ounce of hypo to a gallon of water. This means a quarter of an ounce to the quart, an eighth to the pint, and so on. A pound of hypo, costing three cents, will make sixteen gallons, and will tone and fix prints by the thousand.

In picking prints out of the washing tray, be careful not to touch the surface of the paper with fingers which bring a trace of hypo from the toner. Lay the print, face upward, in a clean, empty tray, and pour over it, quickly, from a pint or quart graduate, enough of the solution nearly to fill the tray. If the solution is at normal temperature, as it should be, the print will change color at once, and the instant when the toning becomes complete and *uniform* take it out, and, with a rapid movement, plunge it in the tray full of running water prepared for the final washing. Remember that after the chemical effect of the weak hypo has once been produced, as shown by the changed color, any further action will be prejudicial, and the little hypo which is used in the toning-fixing process must be washed out quickly and thoroughly. The tray used for the first washing must be far enough away from that used for the final washing that there will be no danger of dropping the solution into the first tray, which will produce spotted and discolored prints. The whole process of washing and toning the prints made with the Sepia paper may be conducted in daylight, for after this paper has become wet there is no further chemical action from the light. If the prints are washed without being toned or fixed and then hung up to dry, they will when dry become subject again to the actinic effect of the light.

Some modification of the strength of the toning bath may be adopted with over-printed and under-printed paper. Where in the first wash it is evident that

the print has been over-exposed the strength of the solution may be doubled or tripled. The same directions will apply as to taking out immediately when the change in color has been effected by the toner, but the increased strength of the solution will reduce the print somewhat, particularly in the high lights, and the resulting print will often be satisfactory. I use the word "often" for the reason that when the print is allowed to remain too long in the stronger bath, the same deterioration will occur that is observed with the weak solution and the prolonged toning first referred to. Reductions of over-printing may be obtained by an extremely weak solution of hydrochloric (muriatic) acid in water, say one to one hundred parts. When sufficient reduction has been obtained in this way, wash the weak acid thoroughly from the print and then tone as usual. The resulting tone does not seem to be as good as when a normal print has been made, on account of the great sensitiveness of the paper to chemical action, already referred to.

On account of the small quantity of hypo used in the toning, thorough final washing for fifteen minutes in running water is sufficient. If the prints touch or lie on top of one another in the final bath, it must be expected that they will dry out uneven and discolored. As this paper floats on top of the water, the prints should be laid face downward in both the first and the final washing. In case the directions as to the length of time during which the print shall remain in the toner-fixer seem indefinite, the average time is ten seconds for full treatment. This ten seconds means with the bath at a normal temperature, or tepid. Very cold water produces bad results, with mean, pale prints, and the toning has to be prolonged. Hot water for washing and a hot toning bath have been experimented with by some, but my results have been that there is nothing like the method here described, with the water and bath at normal temperature.

Even when the greatest care has been exercised with all of the work so far, the print may yet be spoiled through neglect in the drying. As there is no gelatine or other sticky surface, the prints may, at once, be placed between blotters, and then laid out separately, face up, when they will soon be ready for mounting. There is an objection, however, to drying between blotters, since there is the temptation to use them a number of times, with the result of retaining a trace of hypo, which eventually will produce discoloration. As it is too costly to throw away the blotters every time, they should be reserved for prints which are wanted quickly. Another method would be to lay them out on boards or stretchers, but these, too, become, in time, impregnated with hypo, with the same result. If waste paper, such as newspaper, is used to cover the board or stretcher fresh every time, there will be no harm. The surest and best method is to have a wire stretched out across the drying room, a little higher than the head, with a couple of dozen spring clips strung on it, and to suspend the prints from them. They should be hung by one corner, so as to drain more perfectly. If the floor is carpeted, old newspapers may be laid underneath to catch the water. Even with the drying there may be some modifications to the tone of the prints, according as to whether the drying is done slowly or quickly. If hung in a damp room with no circulation of air, the prints will be pale and lacking in snap and vigor. If hung in a warm, dry room, or in warm sunshine, browner, better and more contrasty prints will be obtained.

It takes a good while to tell all of the little secrets for obtaining perfect results with this paper, but it is all very quickly and easily done. Those who will be satisfied with nothing less than making a perfect print every time should read over all of

this carefully, and when the principles governing the use of this paper, as with everything else worth knowing, are thoroughly understood, there need be no further trouble. It is needless to say that the only way is to have a system that shall obtain perfect results every time. For those, however, who do not have the time to study the subject in all of its detail, the following brief directions will have to suffice: Print for the medium lights; wash instantly and thoroughly for ten minutes or more in running water; tone-fix in solution of one-eighth ounce hypo in a pint of clean water, removing immediately after color changes uniformly; wash fifteen minutes or more in running water; dry between absolutely fresh blotters, or by hanging by clips from the corners.

Something should be added here in regard to the relative printing speed of this paper. It is a trifle slower than platinum paper, and three times as fast as printing-out paper. As to the visible image, it should be a shade stronger than that of platinum paper. The first wash precipitates on the paper all of the salts affected by the light, and the toner gives the proper color and makes it permanent. Prints dry out darker and less brilliant than when wet. This should be borne in mind in making the exposure. A print which seems to be too light, when washed and toned will, for this reason, often be the most satisfactory. My experience with this paper (and I have used a large quantity of it), has been that it is quite unnecessary to roll in up and pack it in round tin boxes. It will keep perfectly when properly packed in envelopes and be far less troublesome to handle. The curling produced by rolling is awkward and has the added disadvantage of frequently requiring a touch of the finger to make it lie straight in the printing frame, thereby ruining the surface. The finished print must be allowed to become absolutely dry. If any dampness is permitted to remain in the paper when the prints are piled together, they will be found to be streaked or spotted. For these and many other acts of carelessness on the part of the operator, I suppose that the manufacturer is frequently blamed, and I will therefore say that I have never yet handled a sheet in which the slightest imperfection could be attributed to the makers. Imperfections, if any, in the finished prints, have been traced to one of the causes for failure which have been so carefully described here.

As may be understood from the foregoing treatise, the Eastman Sepia paper is, in many ways, quite different from all other photographic papers. There is still another peculiarity which I have been unable to obtain any explanation of. The paper *prints itself*. I mean that if two pieces of unexposed paper be placed face to face, they produce chemical action on each other. This may be more easily recognized by taking an unexposed clipping and placing it face to face with a full piece. When the paper is taken out, after a week or two, the shape of the smaller piece will be found plainly marked on the larger one. In order to produce the best effects with this paper, for professional, amateur or exhibition work, it should be properly trimmed, to suit the subject, and mounted with combinations of buffs and browns. In saying combinations, it must not be understood that I advocate more than one insert under any circumstances, as three or four mounts are productive of photographic monstrosities. But there are many pleasing combinations of buffs and browns for mount and insert, to be selected according to the general effect of the picture.

The spotting and retouching of the prints made with this paper is an important matter. The most perfect color is obtained by a mixture of Vandyke brown,

Venetian red and india ink. Unfortunately, the india ink which I used drew the color from the print producing yellow spots, which were, of course, ruinous. The nearest safe color for retouching is the mixture of the brown and the red, three parts of the former to one of the latter, on a paint saucer. It need hardly be said that the color must be used very dilute for the lighter parts of the print. When all of the directions as to the use, printing, developing, fixing, washing, drying, spotting and mounting of this paper have been learned, the reader will have obtained most valuable information, whether he be professional or amateur, for the production of prints which will equal and probably surpass those made with any other paper or by any other process. From this broad statement, many will differ, by making an exception of the carbon process, that being just a matter of taste, the writer not fancying the minute detail brought out by that otherwise beautiful method.

Finally, this paper has been used very largely for making proofs on account of its quickness, cheapness and ease of finishing. There are many who use it in this way, not realizing that the finest effects of all may, with care, be obtained with the same paper which is now lightly regarded.



FISHER FOLK

BY WENDELL G. CORTHELL

First American Photographic Salon

By JEANNE E. BENNETT

When the photographic world, in the early spring of this year, received the announcement of the First American Photographic Salon certain questions arose in the minds of most of us, which, as the time for holding the Salon drew near, as the questioner was for or against the movement. Boiled down, these questions resolved themselves into (1) What about that jury, will it actually serve or not? (2) What will be the character of the exhibition as finally hung, and (3) Will it prove a success?

The first and second of these questions we will try to answer briefly in this résumé, the third will be answered by the public to whom the verdict is left with all confidence. That wonderful jury. All agreed that it contained a heretofore unequalled array of imposing names certainly so far as anything relating to photography was concerned, and when the knowing ones went over the list they shook their heads and said, "No, never in the world will it be possible to get *those* men together to pass on a lot of photographs." And indeed it did seem to be expecting rather too much of artists of their standing to give a day of their valuable time for that purpose. Hence it was not much to be wondered at when we heard from certain quarters that the jury would not actually meet and do the judging, but that some one or more of the management would do it behind the scenes, and the like.

When, however, Monday, November 14th, arrived there met at the rooms of the Metropolitan Camera Club of New York City the following named jury: Kenyon Cox, George R. Barse, Jr., H. Bolton Jones, Will H. Low, Francis C. Jones, Fredk. W. Kost, Walter Clark, Ben Foster, Irving R. Wiles, Robert Henri, and Alphonse Jongers (at later sittings John Ia Farge, Childe Hassam, Edwin H. Blashfield and John W. Alexander were also present. These all served during entire sittings), who at once settled down to their task after the manner of men who knew their business and were determined to fulfil to the letter the promise made months before, to the management of the Salon. At the outset (we must remember this was their first experience in judging photographs) the question arose, "Upon what basis shall we make our judgment and what shall be the rule for guidance in the acceptance or rejection of the work submitted to us? Kenyon Cox acted as spokesman: "Method must not be apparent. Work must not be purely imitative nor attempt to give the effects of colorists. Its own field is so beautiful, dignified and important that it is not necessary to copy the methods and effects of painters," and to this they all agreed. Let us remember this as it will help us to answer, later on, the second question.

The standard or rule having been fixed, to use a figurative expression, the gentlemen of the jury took off their coats and went to work. Work indeed it was, for there were upwards of 9,000 frames to be examined and out of this number only about 400 could, by any possibility, be hung in the gallery secured. The whole day was spent in this endeavor, and as it drew to a close it became plainly apparent that the judging could not possibly be half completed. The gentlemen in charge began to feel nervous and asked themselves what, in the premises, could be done. To request the jury to give another day was beyond the reasonable, and



"DRINK, FOR ONCE DEAD
YOU NEVER SHALL RETURN"
by GEO. H. SEELEY
First American Salon

yet without it how could the balance of the would-be exhibitors receive proper judgment. It really did look as if the knowing outsiders would prove partially correct after all and that as far as some of the photographs were concerned the judging would, of necessity, have to be done by the managers themselves. Their uneasiness was groundless, for by this time the jurors had become thoroughly interested and not only did not have to be asked, but of themselves volunteered to meet again. And meet they did, not only the second but the third time.

Thus all the photographs, good, bad and indifferent, were submitted to them, and our first question was answered in no uncertain manner. Now as to the second, the character of the work passed by the jury. Does it, or will it meet with unqualified approval by the photographers and by the public as well? Most assuredly not, for in this as in all other cases, sides will be taken, favorable and otherwise. We ourselves must confess to a divided opinion in the matter. Being somewhat behind the scenes we had opportunity to see, not only what was accepted but also some that was rejected. The standard set by the jury was so radically different from that to which we pictorialists with the camera have been accustomed that the result gave us somewhat of a surprise. For instance, when some of our beloved gum prints upon which we had bestowed so much care, were discredited because the method, the brush, was apparent, it made us feel queer, and when some of our "straight" work also reposed in the ranks of the rejected because, forsooth, it struck the jury as being in imitation of the work of some painter, it made us feel queerer still. We say this not in any spirit of faultfinding, for we are not of the number to complain and we realize that when we submit work to a jury we should cheerfully abide by its decision. What we mean is that the rule set by this jury has been productive of an exhibition different from that to which we have been accustomed and that in consequence, as this is the first of its kind, comparisons, always odious, cannot fairly be made.

In the exhibit itself, as it hangs on the walls of the Clausen Galleries, we find a wide range as regards the workers of the world. Canada, England, Scotland, Belgium, Denmark, Italy, Russia and others are represented, though of course the majority come from this country, and we find them from the Atlantic to the Pacific, from the North and from the South.

The Western exhibit is especially worthy of notice and we congratulate California, Oregon, Colorado, etc., on their number of strong workers. Oscar Maurer has four frames, the best of which is "In Amalfi." "In Marin County," reproduced in the catalogue, is strong in composition and only a sure and good worker would have attempted it. "On the Maas," though small, is a gem.

Herman S. Hoyt's four, all good, though perhaps "Indian Pottery Burner" is the most interesting. John T. Diebels' "Restless Sea" is full of motion and very fine. E. N. Sewell's "Oyster Boat" is simplicity itself, a thing so hard to produce in photography. Elizabeth Burton's "Bathing by the Stream" does not appeal to us, but nudes seldom do in photography. Adelaide Hanscom's "Mother and Child," although hackneyed in name and subject, is a beautiful picture, full of charm and fine in technique. "Belfry Stairs," one of the two by L. M. Kaiser, is a fine gum print and among the best shown. "Portrait," by W. E. Dassonville, is a clever study in black and white, and will attract attention anywhere. Laura Adams Armer shows "The Laurels," of fine and unusual composition. An example



ALONG THE DOCK
by DR. W. F. ZIERATH
First American Salon



PETITE MARIE
by JEANNE E. BENNETT
First American Salon

of how a photograph can be good and soft even if full of detail, is the "Early Morning in the Woods," by Walter A. Scott. W. J. Piatt's "Dusk" is especially commendable for its composition. The portraits of Hana Robison are fine, vigorous specimens of that branch of work. The study in the nude by F. E. Monteverde is a bold attempt at a difficult subject for photography and one in which diffusion is well suited. His "Fish Cleaner" is broadly treated and worthy of close study. Chas. E. Townsend has three good, strong pictures. His "Yosemite in Storm" is certainly a masterpiece and by some of the jury was considered the best in the Salon.

W. J. Street, F. M. Braddock, Herbert G. Ponting, Edward H. Kemp and Fayette J. Clute, all exhibit strong examples, mostly marine work, full of local color, with fine lines and will hold their own in any salon. Work of Dr. Genthe, although on the way, was not to hand at this writing. Oregon has five representatives with a total of seven frames. "The Usurper," by Helen P. Gatch, is a nicely managed group of a mother and two children and was well worthy of reproduction in the catalogue. "The Meadow," by Bertha Breyman; "Mighty Deep" and "The Fishers," by O. M. Ash; "White Death," by Will H. Walker, and "Oregon Wild Duck Lake," by George F. Holman, are all good. The last named is lacking somewhat in perspective, the values being too equal in foreground and background. Colorado exactly equals Oregon in the number of both exhibitors and frames. Of the four by Thomas A. Morgan, by far the best is "Out of the Mist," although his "Close of a Stormy Day" is a simple subject, well treated. "Evening," by C. S. Price is a little disappointing. The tree trunks in foreground are strong, yet lack roundness and seem too close to the background. George F. Clifton and George L. Beam have one frame each, both of which are good. Coming further East, Minnesota has three exhibitors with a total of eight frames, of which Louis Fleckenstein's (director of the Salon Club) name is on five. The best of his being "The Water Supply," and "Landing the Gamey Bass," the latter a strong study, full of action and broad in treatment. "Edge of the Marsh," by C. F. Potter, Jr., is a charming bit of landscape, harmonious in every way. We had expected to see some of Corydon G. Snyder's etching effects but suppose the jury ruled them out as showing the method.

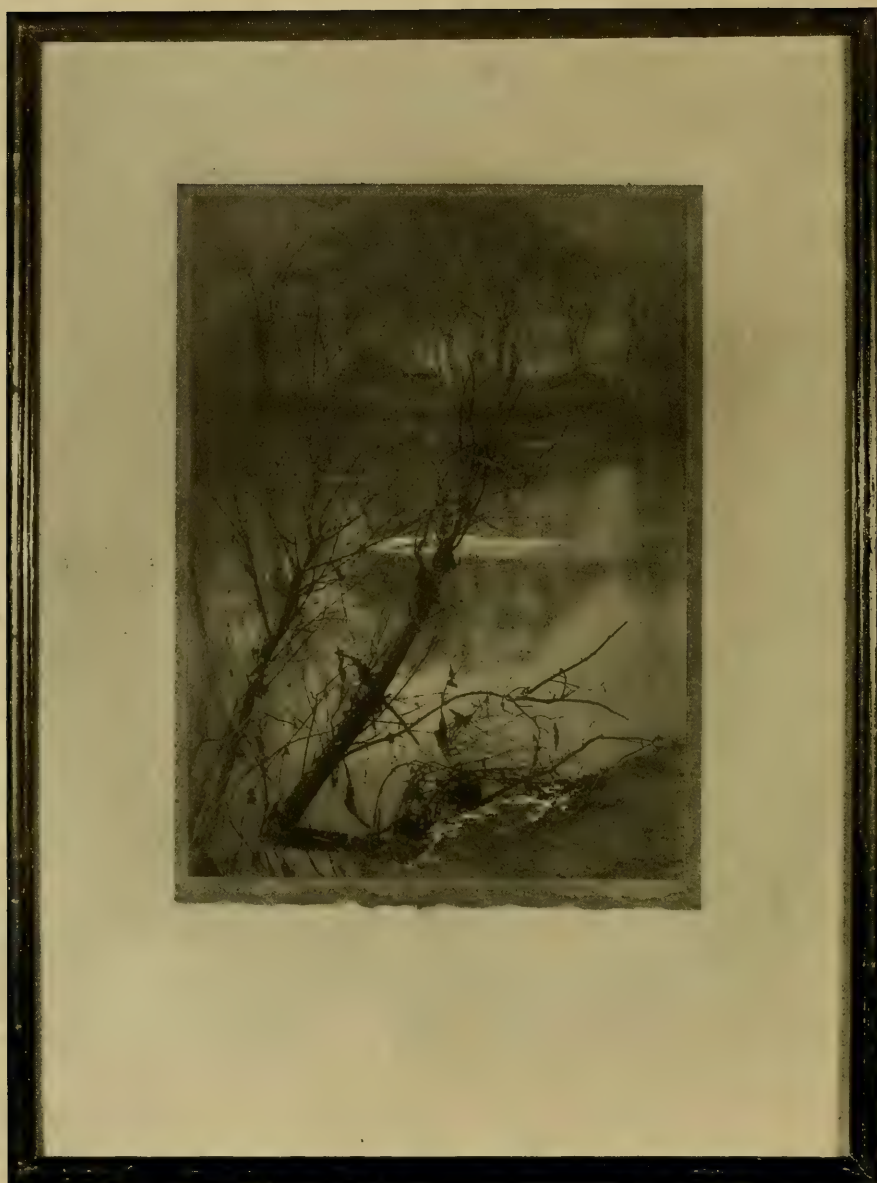
Nellie Coutant did well for Indiana, having seven frames. Her "Spring" is treated broadly and is an attractive child picture. "Who Pulled the Tulips?" would have been more interesting had the child seemed penitent. John Chislett has four, the best of which is "Gray Day at Sea."

Among Michigan's seven frames, Fedora E. D. Brown's "Water Way" stands out bold and strong and her "Old Fashioned Girl" is one of the finest studies in the Salon. One of the few red gum prints accepted was an Italian landscape by Mrs. E. W. Willard. It is good but should have had more foreground. "In Venice" lacks atmosphere; "Poplars" being stronger. A delightful study of woodland is "Wet Spring Woods," by Charles E. Barr.

Illinois comes out strong with nineteen exhibitors. Solon L. Gates has six portraits, all fine and artistic, broadly treated and could hardly be surpassed. Charles O. Axell has also a portrait simple in composition and reminding one of Whistler. D. H. Brookins, Dr. C. W. Hawley, C. G. Dudley, J. L. Rosenberger, C. W. Taylor, George T. Power, F. A. Nichols, Clayton W. Mogg, A. W. Engel,



THE SWIMMING HOLE
by CARL RAU
First American Salon



WINTER EVENING
by OSBORNE I. YELLOTT
First American Salon



MEXICAN THUNDERSTORM

First American Salon

BY DR. CLARK W. HAWLEY

Frank Green, Robert E. Weeks, Dr. F. Detlefsen, A. D. F. Gardner, William P. Gunthorp and Mrs. W. W. Pearce all show good examples.

Wisconsin has eight frames, in all, by three exhibitors. "Waiting for the Fog to Lift," by Dr. W. F. Zierath, almost looks in parts like a wash drawing and is exceedingly interesting. Carl Rau's best, out of four, is his "Swimming Hole." J. H. Field's "Fagot Gatherer" is well worthy of mention.

Among the large representation from Ohio stands foremost F. C. Baker's "Barn," which is good and strong and shows what can be done with a simple subject when well rendered and taken from the right point of view. Clarence G. Brooks, J. W. Schuler, George F. Kunz, E. G. Fountain, F. van Houten Raymond, H. W. Minns, W. F. Provo, Carle E. Semon, Mrs. E. C. Matthews, E. E. Cahoon and Ralph E. Brown all show creditable things.

Walter Zimmerman of Philadelphia has three fine studies; his "Traumerei" is one of the best. Adolph Petzold has seven splendid gum prints, all good and interesting, especially "Returning Home" and the "Road To the Sea." Allen Drew Cook, six frames, has some portraits almost life-size, which seem rather large. "Gertrude" and "Portrait of Mrs. Coloney" are fine and of a more pleasing size. Elizabeth Holden has a charming print entitled "Billy and His Mother." R. J. Hillier's "Harvesting" is good, and these together with R. S. Kaufman, Margaret L. Bodine, E. F. Ryman and John Dolman complete Pennsylvania's list.

Julius C. Strauss, the well-known photographer of St. Louis, has three of his excellent portraits. The Misses W. and G. Parrish have two studies of "Babbie," of which "L'Allegro" is more interesting, being full of expression and charm. George Alexander of Kansas City has three flower studies, very sweet but a little commonplace.

Osborne I. Yellott holds the Maryland banner all by himself and does the State credit with eleven frames. "Over the Hill" will always hold its own and his "November" is a fine example of carbon, good and strong in every way.

The four exhibitors of Maine all come from Portland, and most of the prints are good, especially the "Wave," by F. H. Thompson, and "Wet Day Along the Docks," by S. S. Skolfield.

Of the three frames from Connecticut, "Goat Herds of the Campagna," by Dr. E. P. Swasey, easily carries off the palm.

Among the six exhibitors from Washington, D. C., Albert Le Breton stands out in bold relief with "The Ruined Chapel" and "Desolation," both fine examples of gum.

We always expect good things from Boston and are not disappointed. F. Holland Day's work is familiar to all photographers and his "Master of the Hounds" is his masterpiece. We sympathize deeply with him in the loss of his work by fire and only regret that he did not have more of his prints at this Salon and thus have saved them. George H. Seeley is one of the new names that have come out and he has swept things before him. He stands head and shoulders above most of the exhibitors. His work is soft and strong at the same time. Full of originality. "The Pines' Whisper" makes you dream and hear whispers indeed. "The Grave's Compass," "Landscape" and "No Title" are all pictures that will live and be remembered because they deserve it. Frank R. Fraprie, W. G. Corthell, John R. Smith and Miss Frances Allen complete the list for Massachusetts.

Henry Hall and Margaret L. and Edith H. Tracy have a total of four frames, being all from New Jersey, and of which "Rough and Ready," by Hall, takes the highest rank. Last on the list of states we name New York with nearly thirty names and many more frames.

Curtis Bell, with nine frames, has all new work and very creditable. "Jack-straws" an interesting group of four children and one that is full of interest, we consider his best, although "Passing Shower" and "Fog Clearing Away" both show fine atmosphere. Rudolf Eickemeyer, Jr., has ten frames, some of which have been hung before. "Summer Sea," one of his best, is always a welcome visitor. "Decorative Portrait" and "Portrait of Miss N." are both good examples of the work of this artist. In "Newsboy at Night," and "A Winter Night," by Lee Hamilton Kellar we have two delightful examples of night effects. J. C. Abel shows a good platinum on Japanese paper in "Sunlight in the Woods." The best of the four by W. H. Porterfield, "Life Guard on the Jersey Coast," is strong in every way. Messrs. Benton, Park, Chaffee, Boger, Furness, Lloyd, Knox, Gilbert, Hendrickson, Holden, Farquharson, Zerbe, Wallace, Schreck, Wagner, Horne, Macnaughton, Shipman, Keller, Kent, Miss Louise V. Hitchcock and the writer complete the list from New York.

Turning to the foreign exhibitors, John Hepburn has "Village Doctor," a fine bit of genre. "A Shaft of Light," by S. G. Kimber, is a splendid study of an old cloister with the lights and shadows well managed.

"A Gleam of Light" is a fine marine by William Clayden. Brussels, Belgium, has three exhibitors, Victor Stouffs, Leon Sneyers and Ferdinand Leys, all good.

R. Duhrkoop of Hamburg leads all others with fourteen frames, most of which are large studies in gum.

Henri Foucher, France, "Un Coin de Provence," is only fair. Dr. T. Moeller of Denmark shows a good night study. Oscar Soldtner of Russia sent a portrait of a small boy. Italy has one strong representative in Alfredo Ornano, most of whose pictures are well managed and original.

The Salon shows a variety of work, delicate, soft, sharp and strong, in platinum, gum, carbon and even silver prints. It seems to cover the whole field of photography and is decidedly instructive to those who wish to study it with a fair mind. Long live the American Photographic Salon.

One Amateur's Experience

By SHERIDAN L. BUCK

"You press the button and we do the rest." In my estimation, the too literal acceptance of this familiar expression is the cause, not only of the popularity of the kodak but of the disappointments so often attending the efforts of those too sanguine in their expectations. I must confess that I am but a recent arrival in the kodak field but I have learned many things since my introduction to the work. Let me enumerate a few. Every dealer will endeavor to impress upon the mind of the would-be amateur how exceedingly simple is picture-taking and picture-making. A camera secured, one will find that there is no work in existence concerning which one can obtain so much advice and information, gratis. Even those who have never used a camera will shower advice upon you; no two will tell you the same thing and each one's method is the best. Floundering about



PLAZA DEL MAR AND POTTER HOTEL

in this sea of conflicting advice the hapless beginner fails entirely to use his own good judgment, which in many cases would be of more avail. The abundance of the supply so overwhelms him that he loses his head.

My first camera was a four by five, box type, that the dealer assured me was the latest and best on the market. It cost me eight dollars and that sum plus the cost of a quantity of material was expended in learning that it was incapable of producing good pictures except at rare intervals. While it might have been my own fault I am certain of one thing, and that is that I "pressed the button" most industriously. I exchanged this camera for one of the folding type and after an expenditure of five dollars for films I was rewarded with three negatives that were not light-struck. I am something of a "stayer," but I must confess that photography was beginning to lose its charms for me. Being a constant reader of *CAMERA CRAFT*, I came upon an article entitled "An All-Round Camera," by H. D'Arcy Power, M. D. I at once provided myself with a



SANTA BARBARA MISSION

Folding Pocket Kodak No. 3, and while my troubles did not all cease at once, they disappeared so far as fogged and light-struck negatives were concerned. Out of almost one hundred negatives made with my No. 3A Kodak there is not one that will fail to produce a good print if properly handled.

In my first attempts at picture-taking I was like most other beginners. It was hard for me to realize that my prints would show only black and white. Many films were wasted in trying to portray the beauty of scenes that depended entirely upon their color for the charm which they possessed. In the print, depth and roundness gave place to a meaningless jumble of black and white, devoid of form or detail. I began to study my subjects carefully before making the exposure, asking myself if the lighting was such that different objects would stand out one from another; if the directions of the lines were such that the eye would be pleased; and if the arrangement of the masses were such that the picture would be interesting instead of puzzling. My pictures improved and I demonstrated conclusively that there is something more to be done than "press the button." The camera will not "do the rest" without a good deal of help from the operator. To me, the pleasantest part of the work is printing on Velox paper. For this work I procured two trays exactly alike and after getting them mixed and wasting a dozen sheets of paper trying to develop them in the hypo, I provided myself with a glass tray for the developer and one of rubber for the hypo. After printing several from reversed films I discovered that the shiny side of the film should be placed next to the glass in the printing-frame. Another time I made two dozen prints, each of which had large, irregular spots on them. I showed them to several professionals; one said "poor hypo," another "dirty developer." I discovered that they were caused by failing to rock the tray while developing. Again I made some prints with copper-colored spots. These I found were due to the developer remaining in the emulsion, being allowed to oxidize while in the fixing bath. Sliding the print into the hypo face down so that no bubbles are allowed to form, and sliding it under the prints already in the fixing bath so that the surface will not come in contact with another print, will prevent this trouble. My printing is all



STAIRS TO SUMMER-HOUSE HIDDEN IN LIVE OAKS

are a few that show the variety of my work during the past summer, and while no great artistic merit is claimed for them, I believe that in them I am well repaid for my work.

done by artificial light and in my hands, the prepared developers and fixing baths put up by the makers of the paper, give the best results.

I venture to say that not many amateurs have met with as many obstacles as myself, but I have found pleasure in overcoming them, and do not begrudge one penny of the amount expended in probing into the mysteries of photography. When I shoulder my kodak and go forth I am after something, and as a rule succeed in getting what I want. To the amateur who has laid aside his camera, or who is contemplating such an act, I would say: You are depriving yourself of a great deal of genuine pleasure. If you will provide yourself with a good camera and start again with a determination to conquer the few small difficulties, I am sure the way will grow brighter and brighter as you overcome the obstacles which have discouraged and disheartened you in the past. The illustrations accompanying this article



SURF-BATHING AT HIGH TIDE

Artistic Retouching

By CLARA WEISMAN

A true portrait must have distinction, not solely by virtue of its technique or handling but by its personality as well. If it can be made to convey an impression of a personality it will possess much that makes a picture interesting. If it is merely a precise representation of the subject at hand it is lacking, as this alone makes it commonplace.

Retouching is an art; and the retoucher must remember that any style or class of work, to possess pictorial qualities, must be governed by those art principles which are everlasting, eternal. A good retoucher is a student of character as well as an artist, who, consciously or unconsciously, appreciates a portrait possessing a deep psychological or artistic significance. Such workers do not bring the faces of their subjects to a plaster-cast or marble finish; rendering them as lacking in natural flesh effect and void of expression and feeling. They do not retouch the soul entirely out of their portraits. Retouching improves the work, but only when it does not fail to retain the natural characteristics distinct.

Experience in drawing, an appreciation of form or beauty, a knowledge of physiognomy and of the anatomy of the head, an understanding of the placement and action of those muscles of the face that produce the changes of expression; all are important helps that enable the student to perform his work with due regard to form and modeling. A study of light and shade in the studio under the light, the gradations, the tone-values, will result in a marked advancement if made before the actual work of retouching is attempted. The pupil should study the drawing of each individual feature of the face from any position and with



The first is not retouched; the second has received only necessary retouching to perfect flesh technique and soften lines while preserving flesh effect and character. The third shows the effect of stipple with softness of flesh destroyed, giving hardness.



The first is from a negative giving a flat and lifeless print. The second is from the same negative after high lights of face have been built up; some doctoring being done in printing to bring out the lights while allowing the shadows to gain strength.

different effects of light and shade. He should also observe the gradations, their relative value and their proportional density as interpreted by the light in the studio.

In a plain lighting or three-quarter view of the face, there are five points of light that are most essential to a well-illuminated head; the light on the forehead, bridge of the nose, on the cheek-bone, upper lip, and chin. The other lights on the face are secondary and are of less intensity but equally necessary to produce roundness. The gradations are high lights, half tones (or half lights and half shadows), and shadows; the half shadows being in a lower key than the half lights. The object of retouching is to perfect a well-timed and a well-developed negative. A negative should contain all the gradations between the highest of its lights to the deepest shade; innumerable intervening tones, each blending into its neighbor so imperceptibly as to be felt rather than seen, thus producing a balance of tones, without which, harmony is lacking.

A contrasty lighting with under-exposure gives a negative that can avail but little. The half tones, the tones that bind together the high lights and the shadows, are missing. In a flat lighting with over-exposure the life of the image is lost. The negative is lacking in high lights and in clear, luminous shadows. With proper manipulation in the dark room, plates exposed under both these conditions may be greatly improved; the under-exposure being less amenable to treatment calculated to produce good quality. Such a negative will be harsh, will have less of the finer, clearer, purer quality; will be void of atmosphere, and lacking in that intangible, invisible something that exists in a first-class negative. A negative with good exposure, one with rather a tendency to over-exposure than under, is the best in quality and is the best to retouch. Best because of requiring the application of less lead to complete the work the operator has begun; completing his work being the true office of the retoucher. From the highest technical standpoint, no amount of lead in retouching of or doctoring in the printing, can make the print from a poor negative what it would have been had the subject been properly lighted and the plate properly exposed and developed; for retouching should be but perfecting that which is already well done. Much, however, can be done to improve



Not retouched; while showing all defects, still retains character and is in atmosphere.

poor negatives by manipulation and retouching; so much so that very passable prints can be produced from seemingly indifferent and hopeless negatives. Such work requires great skill, but it alike requires great or greater skill to do only as little work as is absolutely necessary to preserve the beauty and strength in an already beautiful negative; beautiful in its capabilities of producing a picture that possesses the artistic qualifications requisite in the production of a fine picture.

Retouching is necessary and will remain so as long as there are blemishes in the skin, so long as the lens produces detail too microscopically, so long as there are defects to be removed and expressions to be changed; not taking into consideration the retouching made necessary by poor lighting and poor developing.

Detail may next be considered. Simplicity gives beauty and strength. It is easy enough to be elaborate but to add just enough detail to make a picture beautiful

because of its simplicity is the key-note of all work that is beautiful, grand and strong. Detail in itself is not a blemish, but detail out of place is objectionable and a fault. High lights should be simple because light covers up detail. Detail belongs in the half tones or rather half lights; but not in the highest lights. Shadows also should be simple, just enough detail to produce that breadth and transparency which is gained by having some amount of detail in them. A shadow should not be so void of detail that it is empty or opaque, there should at least be some indication of flesh or drapery, as the case may be. Rembrandt, one of the greatest portrait painters, produced deep, transparent, mysterious shadows, with soft blendings, beautiful detail and great depth; and yet his treatment was broad and simple. With a knowledge of the above facts regarding lights and shades and their relations to form of features and expression, the student is better able to take up the retouching pencil to greater advantage and with assurance of better results.

There are two styles of retouching: the mechanical and the artistic. The mechanical is usually the result of working for a grain or stipple; more attention being paid to that than to the quality of the flesh technique or character. Beginners are too often instructed how to secure this stipple, losing sight of the higher qualities that help to produce the picture. This stipple cannot be used and yet retain flesh technique; it is a something that is manufactured, over-done, and a something that takes out all semblance of life. The artistic method is different.

While the work proceeds; that is, the taking out of imperfections, a little modeling here, a little blending there, the softening of a line, the bringing out a muscle, prominence, or feature in another place is accomplished. By seeing that this is all done with a certain degree of finish, the texture or flesh technique will take care of itself. A certain degree of finish is permissible and just. Nature tends to regularity and uniformity; the natural pores of the skin are a good example. Observation of nature teaches us that a subject with the stamp of age upon his face and a coarse texture of the skin should not receive the fine and smooth effect that is characteristic of a child. The texture must be in keeping with the subject's age and individuality if a natural appearance is the wished-for result.

Compare two prints from the same negative, the one retouched with as little work as is necessary to make complete the picture and the other with the same changes made, but further retouched with the object of having a stipple. It will



Forehead stippled; out of atmosphere, hard effect and character lost, due to stipple.

be found that the former possesses a beautiful naturalness, a life likeness and that a feeling exists. In the latter the existing good qualities have been changed to a hard effect and merely for a fancied improvement. There is no truth in a stipple. It takes only a few strokes to destroy the evasive, elusive quality, the most delicate of delicate possibilities a negative may possess. It is undeniable that more work or more lead than is necessary will destroy this almost intangible quality. No amount of lead can make the negative more beautiful than that part which is already perfect. As another illustration: retouch a forehead with this stipple effect and then examine the negative. Compare the rest of the face which is untouched with the forehead carrying the stipple. There will be found a "setting in" or a feeling of atmosphere in the untouched part, while the forehead will appear in front of and out of atmosphere; it will stand out of something instead of in. This result is due to a violation of the law governing the rendition of perspective and atmosphere which will be discussed in some succeeding article.

One of the hardest things for a beginner to learn is to secure in his work that appearance which makes the texture obtained seem a part of the original skin and not a surface laid on top of the skin. While working, he should think first of the stroke; its placement, weight, direction and length. The rest will take care of itself later. The first tendency will be toward a too heavy stroke, the next will be to make the stroke the same weight over the entire face. Each imperfection

requires a certain weight of touch and no other will do as well. Each gradation requires a lighter or heavier stroke, according to its intensity. By this change in the weight of stroke which is applied to the respective parts, the work will gradually perfect the negative, and the result will have the appearance of being a part of the skin instead of a surface applied above it. Such work also preserves atmosphere and modeling, secures perfect flesh technique and at the same time retains whatever else the negative may possess that is good.

In future articles on the same subject I shall take up various phases of the work and endeavor to show examples of both good and bad work; over-elaboration and misdirected effort as well as work showing an appreciation of the requirements and possibilities of retouching. The subject is entirely too broad a one to permit of more than general treatment in one article but I have thought it best to make this effort in the direction of practical instruction as little dependent upon what is to follow as possible, to the end that there need be no loss of interest through incompleteness of the matter presented.

To the photographer who desires to produce pictures, a knowledge of the rules of art is of the most emphatic importance. From the nature of his art he is less called upon to give a form to pictorial conceptions that give pictorial embodiment to existing facts, and it is often only by arrangement of existing material and management of light and shade, that a pictorial character can be given to the representation of prosaic facts. "These rules, of old discovered, not devised, are nature still, but nature methodized."

H. P. ROBINSON.



HER VOYAGE DONE

(COPYRIGHTED 1904) BY ALFRED ANDERSON
Oregon Camera Club

Tenth Annual Exhibition of Oregon Camera Club

The tenth annual print exhibit of the Oregon Camera Club was thrown open to the public November 21st in the club-rooms, Macleay Building, and some of the finest specimens of photographic art ever seen in Portland were given to public view. The exhibition of last year was a most creditable one and much fine work was shown, but in the recent exhibition the technical manipulation of prints was superior and the selection of subjects was more confined to the lines of art than heretofore. The framing was in quiet but perfect taste and the general tone of the collection good from every standpoint.

A carbon by G. F. Holman entitled, "After the Storm," was the winner of the Holmes marine trophy. Another marine which will be greatly admired by artists is Alfred Anderson's "Her Voyage Done," reproduced herewith. This carbon has been well handled and would have been the gem of the exhibit had the moon-light effect been brought out in blue-black carbon instead of sea-green. This picture was in close competition with Mr. Holman's marine for the Holmes cup. George S. Shepherd presented a very fine marine done in bromide, which also received favorable mention in that class.

"Antarctic Fury" was obtained under great difficulty in the South Atlantic Ocean, the artist leaving the vessel on which he was voyaging and going out in a rowboat in order to get height to the waves. This picture should have been shown in color other than black, much of its beauty having been lost in the printing.

The best landscape in this year's exhibit was presented by Henry Berger, Jr., in "An Idle Little Stream," taking the Gavin cup. Mr. Berger has treated his subject most artistically and his mechanical work was well done. There were many other good landscapes hung in the exhibit, notable among which were those in the general collection of Harry G. Smith, who took the Judd cup this year. The gem of this collection was "Gray Day," also reproduced, a gum print so cleverly executed that the walk looks wet and slippery



SHARPENING THE PLANE

BY H. J. THORNE
Oregon Camera Club

and the Oregon mist hangs in the background. A flower study is also good.

"A Portrait Study" by H. J. Thorne won the Smith trophy. There was much good work done in portraiture this season, but Mr. Thorne's was considered by the judges as excelling all others. I. N. Lipman showed some work in this line, and Miss Hutsby, Mr. Holman, C. J. Gray, Paul Wessinger, Mrs. P. A. Davis and others had creditable specimens. J. A. Haran showed some good Indian studies, and Kenneth Mackenzie, the youngest member in the Club, had a good thing in a portrait of a small Indian boy, entitled "Sunny Jim."

The Alfred Anderson trophy for the best genre print was awarded to Lynds W. Jones, whose "No Fun for Baby" tells a perfect story of childish mischievousness. L. C. Henrichsen's exhibit was good, "At Nature's Tavern" deserving

especial mention, as does C. H. Hoeg's landscape, "The Creek." H. Claussenius, Jr., showed one of the best pictures of Mount Hood seen for some time, and O. M. Ash, whose prints were not entered for competition, has hung some artistic work.

In outdoor portraiture George E. Beeson's "A Positive and a Negative" was very fine, and Miss Hutsby's "Coquette" was also splendid. G. F. Holman had an unusual study in "An Egyptian," and also in "The Wounded Monarch," which is a wounded mountain lion, taken in the open. The appearance of this lion both in posture and apparent texture of his skin as photographed have given rise to much comment favorable and unfavorable. The print is well done in carbon.



GRAY DAY

BY HARRY G. SMITH
Oregon Camera Club

Hosmer K. Arnold, I. Lesser Cohen, W. D. Deaver, W. H. Downing, F. H. Fleming, J. P. Plagemann, Simeon R. Winch and Chester C. Walton all had good work on exhibit, and Miss Breyman, whose work was not in competition. Hugo B. Goldsmith, of San Francisco, hung eight prints which were noncompetitive. They were up to the usual fine standard of the Goldsmith's and were mostly Chinese subjects. They added greatly to the general exhibit and were much appreciated by the committee. An unusually artistic catalogue had been gotten out, inclosed in an art poster cover. Handsome half-tone inserts were made of several of the prints on exhibition, and the general tone was high class. The Club was open to the public every afternoon and evening and every one was cordially invited to visit the exhibit and offer criticism on the work.



TIDE-LANDS
by MISS BERTHA BREYMAN
Oregon Camera Club

Why I Like Kodoid Plates

By WM. S. RITCH

Mr. Ritch is the author of the new booklet just off the Kodak Press, entitled "Amateur Portraiture by Flashlight." No book of its kind has received so much flattering comment from the photographic press of the country for a number of years. It is believed that this favorable and widely popular introduction of Mr. Ritch to the amateur photographers will make the following brief note on a phase of his personal practice doubly interesting to our readers:

In the practice of home portraiture, making from one to five dozen negatives during a day, I have found Kodoid Plates such a time and labor-saver, besides giving such beautiful soft effects in the finished print, that I have written the following as the result of my experience, for the benefit of others who may not have tried them. In the first place five or six dozen Kodoid Plates can be carried about all day, with my other apparatus, with perfect ease, while the same number of glass plates would be quite a burden.

In developing I slip one plate into the developer, rock the tray a little until exposure is found to be about normal, turn the negative over, and let it develop face down, while another is slipped in to develop face up. Covering that tray with a board I place another tray on top and slip in two more negatives, finishing the whole four in from fifteen to twenty minutes. In fixing and washing I treat them the same as prints, putting as many as are wished in a large tray of hypo, and washing them in ten or twelve changes of water, thus making wash boxes and fixing boxes unnecessary.

I find the surface of Kodoid Plates much easier to retouch than the hard surface of glass plates, the texture being more like drawing-paper. Printing may be done from either side, making a reversed image if desired, or obtaining the correct picture in carbon with the single transfer. Best of all, the non-halation and orthochromatic properties of Kodoid Plates give the finished print a delicacy and softness beyond comparison with prints made from negatives on glass; especially is this so in subjects of much contrast.

Last but not least is the keeping and filing of negatives. How often have I hunted for a certain glass plate, looking through the whole batch to find it at the end. Perhaps others may keep their negatives filed and in order, but I never felt like spending my time that way. With Kodoid Plates I can put all of one subject in an envelope together, and while using for printing, etc., can lay them around anywhere without danger of scratching or breaking. After work is finished on them the envelopes can easily be put away and arranged alphabetically, as there are very few of them compared to glass plates, where each plate must be put in a separate cover.

On the whole, the non-halation and orthochromatic qualities of Kodoid Plates make them all that a plate should be, while the ease of keeping and filing the finished negative has saved me no end of trouble, to say nothing of the other advantages of light weight, fixing, washing and retouching. I have never yet scratched a Kodoid Plate.



CAMERA CRAFT

ISSUED MONTHLY BY

The Camera Craft Publishing Company

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. X.

SAN FRANCISCO, CALIFORNIA, JANUARY, 1905

No. 1

The Field for Photography

The average professional who sits in his place of business and grumbles because the income on his limited output does not pay him a handsome profit, should take a lesson from some of our hustling friends in the southern part of the State. In a neat folder which reached me this week they say: "Photographs Made for the Following Purposes." This is followed by a list which should interest a great number of possible customers. In this list, which is headed "Promotion of" is found: Mining, Irrigation, Cattle Raising, Land Sales, Industrial Enterprises, Legal Evidence, Structural Work, Catalogue Illustrating and Advertising Efforts. Not only are these claims made in the folder but the gentlemen are prepared to show samples and give reasons why their services should be secured. And further, they are not entirely satisfied to await such demands upon their resources. Their capabilities are brought to the notice of every prospective customer that they may find within their territory. I doubt if they are wasting much time in grumbling over their lack of reward.

New Models

CAMERA CRAFT is in a position to state definitely that decided improvements will be made all along the line of camera construction and this at no very future date. While the number of models will be somewhat curtailed, it will be only for the reason that the remaining ones will embody all the good features of the larger number. Complete in equipment and as nearly perfect as the present instruments are supposed to be, the manufacturers have found it possible to incorporate improvements that will make the new models for the coming year even more desirable than the most sanguine can expect. With each added improvement, with every increased convenience and with all argumentation of the possibilities placed at our disposal, our debt to the manufacturer is increased. I believe that we would all show more consistency were we to grumble less loudly and less long when our shutter sticks or some trifling matter goes wrong.

Some More Congratulations in Order

CAMERA CRAFT took occasion to congratulate its readers as well as itself, recently, on the fact that it published only original articles. CAMERA CRAFT has been led to follow this plan by the many letters of appreciation it has received from its discerning readers. This month we present several articles that are not only original in treatment but on subjects well-nigh original, although belonging strictly within the scope of a photographic magazine. Mr. Roloff's article fills a demand that has remained unsatisfied for years, as can be attested by our own letter files and the "Correspondent's Columns" of our contemporaries. This article is not vague and unsatisfactory. Neither is it reprinted from a foreign journal, making responsibility doubtful, but it is in Mr. Roloff's clear style, fully illustrated, and endorsed by his offer to give any further information that may be desired. Dr. Power's article, showing increased possibilities in pinhole work is as new as it is interesting. Mr. Zimmerman's article on Sepia paper is as valuable as it is exhaustive. Our report of the First American Salon by Mrs. Jeanne E. Bennett is perhaps the first appearance in print of this gifted artist of the lens, and will be all the more welcome by that large body of our readers who are familiar with and admirers of her work. Mr. Bartlett's article is decidedly in advance of the usual advice on the subject of artistic mounting. The difference between an intelligent understanding of the underlying principles and a blind following of the usual advice to try various combinations until one is found pleasing, can be appreciated by the most superficial reader. Other articles in this issue will help to prove that original matter and original treatment combine to make a publication more nearly satisfactory than even the most carefully selected aggregation of articles borrowed from other magazines.

"The Perkins' Press"

A handsome thirty-two-page booklet has reached me this week with the above title on the cover. The Perkins' Press comprises *The Tacoma Daily Ledger*, *The Tacoma Daily News*, *The Bellingham Daily Herald*, *The Olympia Daily Recorder* and *The Everett Daily Herald*, not forgetting the Tacoma Engraving Company. Both Mr. Perkins and his able assistant, Mr. Bryan, are personally known to the Editor of CAMERA CRAFT, and in commending the wonderful facilities they have placed in the hands of the general advertiser, I can do little more than say that the field which their several bright and progressive publications open up to the advertiser is one that should be promptly investigated. Their circulations are inviting and particularly so when it is remembered that a given circulation in this territory is worth more than a multiplied amount in that further east. They are earning the substantial support which is rewarding their enterprise and good business methods.

Mr. S. T. Oswald of Willis & Clements, Philadelphia, manufacturers of the famous W. & C. Platinotype papers, is spending the winter on the Pacific Coast. Mr. Oswald will be in San Francisco for the next thirty days, making his headquarters at Kirk, Geary & Company's, 112 Geary Street.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

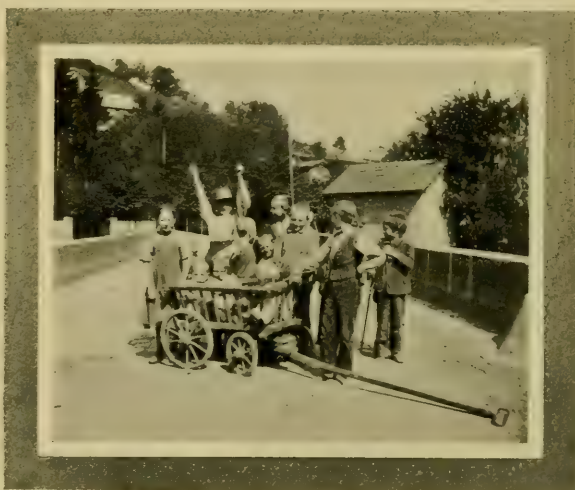
Some Pleasing Pictures

One of the CAMERA CRAFT readers, Frank J. Stumm of Benicia, California, who has just returned from a tour of Germany has sent me a collection of fine little pictures made while in that country. His pictures depicting child life are very pleasing. One of them will be found reproduced on this page. He writes: "There are no children in the world more eager to pose for the benefit of an amateur photographer than those of the German peasantry. They know quite well that the amateur is in search of subjects that are new and novel, and they are ready with most original suggestions in that direction the moment they are assured that they are desired as subjects. Coming into a village near Bingen one morning, I stopped to inquire the way of a crowd of boys who were fishing near the road. I was at once recognized as an amateur photographer and immediately surrounded by the most eager lot of subjects for my camera that it had been my lot to encounter. I could not allow the opportunity of securing such an interesting group of youthful fishermen to be lost. Choosing the moment that seemed most vital, when all except the girl at the left and her charges in the ancient wagon were feeling most "natural," the exposure was made. A moment's delay and the effect would have been lost. My only regret is that I failed to secure the expectant face of the little girl who is approaching from the

rear, which, unfortunately, is only partly visible.

About Lenses

And this week came a number of further questions about lenses. One of them was to decide an argument, and necessitated a very long letter which at best was not an



GERMAN PEASANT CHILDREN

BY FRANK J. STUMM

answer to the question, because the question itself was vague. The most of those queries, however, were from photographers who seemed to think that if they can only find the right lens they can get the one instrument to answer all their purposes. This is a wrong idea. I know a gentleman who can show you good portraits made with a landscape lens, but he would never think of soliciting portrait work as a business without first investing in another instrument.

Another man can show you a landscape that has been hung at various salons, made with a portrait lens, but this same gentleman would never think of going a-field after landscape studies equipped with that lens alone. To come down to the matter in hand: A lens for landscape work should possess good depth of focus, and the older types from their roundness of field certainly do possess more depth, practically, when used on the average landscape that recedes in the center; it should be of a length of focus not less than the diagonal of the plate and even that is too short when the plate is used horizontally; and it should cover fully the plate so that it can be raised or lowered on the camera without failing in its work. The focal length of a portrait lens should be governed more by the size of the head than by the dimensions of the plate; there is not the same demand for good covering power, and depth of focus is not required. A group lens on the other hand is an entirely different matter. When we come to interiors it is evident that a still different form of lens must be used. Wide angle, truly rectilinear and with good depth of focus, the qualities that go to make a good instrument for interior work are not found combined in any other type of lenses. Again, the man who desires to do focal-plane shutter work finds his main requisite to be speed. Depth of focus he knows he must sacrifice, distortion due to too short a focal length he can overlook. His requirements demand one of the most rapid anastigmats of too short focus for the best portraiture and used at an aperture entirely useless in interiors or landscape work. But we are asked which is the nearest approach to an all-around lens. The all-around work of two different men will be found to differ. The portrait lens is perhaps the least useful outside of its own field. The wide-angle lens intended for interior work is the next least available. Good groups can be made with both a landscape lens and an anastigmat of not too short focus. The same can be said in regard to portraiture if we specify that the landscape lens is a rapid rectilinear of a good make, working at a large aperture. The same may be said of architectural work providing the rapid rectilinear is as specified, insuring the securing of rectilinearity of the lines. The field thus narrows down to these two types. The advantage lies with

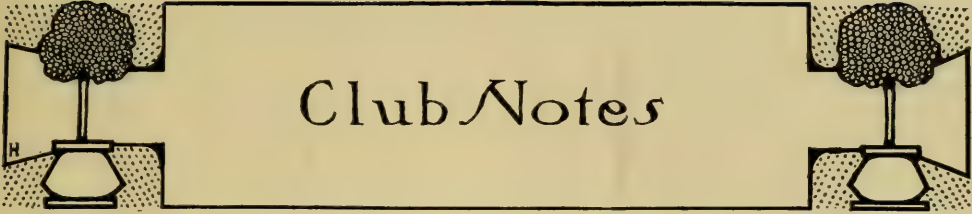
the anastigmat if one is selected with a focal length that is sufficient. The moment this is done, the price gives the advantage to the good instrument of the rapid rectilinear type. The safest counsel I can give is to convince yourselves that there is no lens that will fill all requirements. Learn the limitations of the instrument you possess and inasmuch as it may fall short in some particular line, purchase additional instruments for the work as your requirements demand.

Metol Poisoning

One of my correspondents in Kansas has just discovered that he is susceptible to metol poisoning. I sent him a rush letter, but for the sake of some other possible sufferer will give the remedy here. Before doing so I wish to say that only in rare cases does any trouble follow the use of this excellent developer. If you are one of the rare individuals who are susceptible there is nothing to fear for the reason that you will have fair warning and at most the trouble is but temporary. Some people are as easily affected by such a simple and every-day chemical as liquid ammonia or, as is a friend of mine, aniline blue. Others find no injurious effect following the use of a strong solution of any of them, or as a writer said in defence of metol a while ago, he had literally bathed in it. But the remedy; it is simply Resinol Ointment. It is a proprietary preparation that can be secured at any drug store. It relieves the intense itching almost instantly and if applied quite often, as it should be, it will prevent the skin coming off. For the information I am indebted to R. P. Daniel of San Antonio, Texas; a gentleman connected with a large hospital there, and one who has suffered from metol poisoning himself.

Safe Edge for Carbon Printing

Another inquiry concerning the making of a safe edge, tempts me to give my own practice in this matter. As I work constantly in carbon, I make my safe edge when I develop my plate. I have a piece of heavy glass covered with black paper a size smaller than the plate I am about to develop, which I superimpose on the latter, then I strike a match, hold it above the plate for a moment, and develop, and get my negative with a safe edge as a part of itself.



News Items From the Various Camera Clubs

By C. A. GOE

New Quarters

Probably the Directors of the Camera Club have never had a proposition quite as liberal and advantages as the one put before them by the Jefferson Square Club. The following extract from a recent circular will better explain the matter, and it is to be regretted that at the time of going to press we are unable to give the result of the vote of the members:

CALIFORNIA CAMERA CLUB,

San Francisco,

December 12, 1904.

To the Members of the

California Camera Club:—

For a long time past our Board of Directors has considered the proposition of moving to more commodious quarters, and in this matter we have been prompted by the express wishes of a large portion of the active membership of the Club. Within the last few days a proposition has been submitted to the Board which we desire in turn to submit to the general membership. Desiring, in such an important matter, to defer to the opinion and judgment of the members, your Board at a special meeting resolved to bring this matter to your attention.

The premises to be occupied are the major portion of the third floor of the building on the southwest corner of Golden Gate Avenue and Octavia Street.

The proposition is presented to us in the following language:

"We are informed that the California Camera Club wish larger quarters, and believe we have just the place for you on our third floor, which will give you several times the space you now occupy, enabling

you to arrange your various working rooms, offices and reception rooms more conveniently and to accommodate a much larger membership.

Our building (which is located on the southwest corner of Golden Gate Avenue and Octavia Street) is new and equipped with passenger and freight elevators, electric lights, steam heat and water, and faces the beautiful Jefferson Square, and has fine light, sun and fresh air. Under separate cover we are forwarding to you a floor plan prepared by some of your members, showing how the space could be arranged.

There will be an inside stairway connecting this floor with the second floor, where is located the Jefferson Square Club, which contains twelve bowling alleys, six billiard and pool tables, four shuffle-boards and other amusements. There are also a fine grill and bar on this floor. Your Club would have at its disposal all the privileges of the Jefferson Square Club.

Passenger elevator runs daily (including Sunday) from 8:30 A. M. until 12:00 P. M. Wide stairs from main entrance on Golden Gate Avenue and side stairs on Octavia Street. There is a heavy population surrounding this location, which should enable your Club to secure many new members.

The large hall (as shown in the drawing), 36x90, could be used for photographic, art and other exhibitions, dances, socials, musicales and other purposes. When not in use by the Club, it might be rented out, and quite a revenue derived in that way.

Our property is located practically in the center of the residence section of the city, and is only a short ride from the business portion of town. Car lines are very convenient."

A blue print showing a suggested plan of arranging the floor space will be found on the bulletin board at the Club rooms.

We enclose herewith a postal card. Indicate thereon your opinion by crossing out either the word "For" or "Against."

A. L. COOMBS,
President.

W. E. DASSONVILLE,
Secretary.

Monthly Exhibition

On Friday evening, December 16th, Professor T. J. Alley, explorer and adventurer, delivered a lecture on one of his journeys "Through Wildest Arabia." As usual the audience was made up of about two thousand of the friends of the Club members.

Christmas Tree

Santa Claus will call at the Club to distribute his presents to the members this year a little ahead of his usual time, viz: Thursday, December 22d. He will be pleased to meet all his friends, and the many surprises he has in store for them will more than repay them for being present. Santa Claus will be pleased to distribute any presents left at the Club. The Entertainment Committee have arranged an interesting program for the occasion.

The First American Salon

The San Francisco members of the Salon Committee of the American Federation, were successful in getting a liberal number of pictures for the First American Salon. We are now in receipt of the catalogue and find that out of three hundred and seventy-eight pictures selected by the Jury, fifty-four were sent from the Pacific Coast, representing twenty-five out of twenty-nine who contributed their work to the Pacific Coast Committee of the Federation.

When it is known that nearly ten thousand pictures were placed before the Jury the showing made by the Western workers certainly is far better than that of any other section of the country, and the Salon Committee feel very highly elated at the success met with by those who contributed so handsomely. Fifty-four pictures accepted out of a total of two hundred and twenty-four sent is certainly a most creditable showing. Particularly is this the case when it is remembered that this shipment came before the

most exacting Jury, which assembled at the second day's judging.

Below is given a list of those whose pictures were accepted, with the number of frames hung:

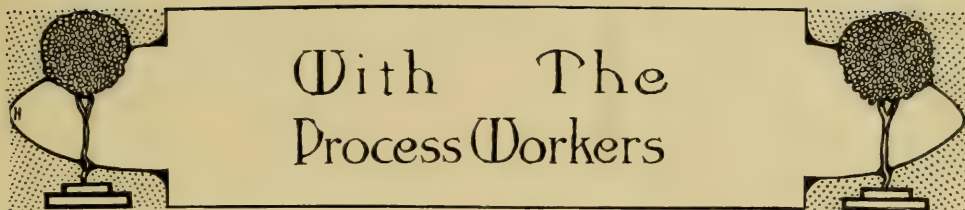
- 1, Laura Adams Armer, Oakland.
- 2, O. M. Ash, Portland.
- 2, F. M. Braddock, Stockton.
- 1, Bertha Breyman, Portland.
- 1, Elizabeth Burton, Santa Barbara.
- 2, Fayette J. Clute, San Francisco.
- 3, W. E. Dassonville, San Francisco.
- 2, John T. Diebels, San Francisco.
- 2, Helen P. Gatch, Salem.
- 2, Arnold Genthe, San Francisco.
- 1, Adelaide Hanscom, San Francisco.
- 1, George F. Holman, Portland.
- 4, Herman S. Hoyt, San Francisco.
- 2, L. M. Kaiser, San Francisco.
- 3, Edward H. Kemp, San Francisco.
- 4, Oscar Maurer, San Francisco.
- 2, F. E. Monteverde, San Francisco.
- 1, W. J. Piatt, San Francisco.
- 1, Herbert G. Ponting, Berkeley.
- 4, Hana Robison, Berkeley.
- 2, Walter A. Scott, San Francisco.
- 5, E. N. Sewell, San Francisco.
- 2, W. J. Street, San Francisco.
- 3, Charles E. Townsend, Oakland.
- 1, Cora T. and Will H. Walker, Portland.

The Brooklyn Camera Club

The annual exhibition of the Brooklyn Camera Club will take place February 16th, 17th and 18th, 1905. This will be an open competition and all photographers are invited to send some of their work. Entries must be in by February 4th, 1905. Further information can be had by addressing C. M. Shipman, 776 Manhattan Avenue, Brooklyn, New York.

Mr. Kemp's Demonstration

The demonstration given before the California Camera Club on the evening of November 22d, by Edward H. Kemp was one of the best with which the Club has been favored in a long time. A number of negatives handed in by the members were most successfully treated during the evening, interest being maintained until a late hour. Mr. Kemp has been urged to prepare this lecture separate from the demonstration, for the pages of CAMERA CRAFT. It will no doubt appear in the next issue.



By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Screens for Color Work

Max Levy in the *American Annual of Photography* gives some interesting facts about screens for three-color work. He thinks that the pair of screens ruled at the proper angles for the work will give place to the circular screen. He says:

"The advantages offered by a screen of circular form have stimulated the efforts to minimize the disadvantages which have been found to attend this form of screen. Only two objections have been urged against the circular screen: one, the difficulty of turning in the holder or camera, which is purely mechanical and can readily be overcome, and when overcome in the manner shown below, affords a further advantage over any other existing method in the complete protection of the screen from the silver solution and the large measure of further protection from accidental injury through jar or other causes. I have recently designed an arrangement and constructed a lathe for turning the aluminum rings up to seventy-two inches in diameter. In this arrangement the screen is carefully fitted and cemented into a ring turned from an aluminum casting, and this ring is arranged to rotate upon two friction rollers and a friction clamp, all of which are mounted upon a framework carefully built up of sheet aluminum and properly braced. The ring is graduated half way around, the gradations being fifteen degrees apart, and a pointer is mounted upon the

framework by which the angle is read off. The direction of the rulings is carefully marked upon the screen, and one of these rulings is made to conform to 0 degrees and 180 degrees on the circular frame. A screen forty inches in diameter, made for my exhibit at the Louisiana Purchase Exposition (St. Louis, 1904), is mounted in this manner and moves with the greatest possible freedom and precision, so that in using such a screen there need be no fear whatever of any error in the angle of the rulings in resulting plates.

"I shall now take up briefly the chief obstacle in the way of the use of the circular screen; this is the extra large size of camera and plate-holder required. The effect of this disadvantage is reduced by placing the screen in the camera instead of in the holder, the former being the English and Continental, the latter the American practice. I am able to say at this time that the difficulty is substantially if not entirely removed by an ingenious contrivance I have seen, in which a plate-holder of the normal size for the required plate is employed in connection with a circular screen and framework considerably larger, the screen and framework being mounted in the back of the camera, with ample provision for cleaning the screen without removing it from the camera. I am unable to give full particulars of this device, as the inventor is not yet ready for publication."

Cleaning the Half-Tone Plate

When an enameled half-tone plate is etched, it is customary to fill the etched parts with magnesia to learn the state of the plate. This dispenses with proof-pulling. When re-etching is done, the magnesia, though not interfering with the mordant, combines with the perchloride of iron to make a solid substance which is difficult to remove even with a stiff brush. It can be removed by laying the half-tone plate in a weak nitric acid bath for a few minutes and then holding the plate under the tap. *Process Work* has asked for suggestions to remove this hardened magnesia and here are a few of the replies: W. H. Blundell uses a dram each of chromic and sulphuric acids in 20 ounces of water. H. E. Tilyard recommends 10 ounces of hydrochloric acid and 2 ounces of salt in 20 ounces of water. F. Dugmore warms the plate and uses a warm solution of acetic acid. Burman Norton applies liquid ammonia to the plate and uses a stiff brush each way with the ruling. W. B. Law finds that using prepared chalk instead of magnesia he has no trouble in dissolving the chalk in the acid. A. Jinks adds 8 ounces of methylated alcohol to 3 ounces of hydrochloric acid and 6 ounces of common salt in 8 ounces of water and brushes lightly with the screen grain. A. J. Newton, of the Bolt School, says the chromic sulphuric acid solution is the one they use as an opening bath if the plate appears a little scummy, and the same solution afterward to clean the magnesium out of the plate.

Newspaper Cuts

The following, from an article by Robert E. M. Bain, gives a good idea of the actual requirements of newspaper pictures:

"Newspaper work is in a class all its own. It does not deal with fine negative work, nor, in any degree, whatever, with art. The whole is subservient to news-interests only. The pictures should have "snap" and life, and pertain to live issues in which the public is particularly interested. Of street scenes, portraits of public speakers of note delivering addresses, war scenes and other work of a similar character, the photographer must catch his subject as he finds it and cannot wait for conditions which would enhance the pictorial effect. Light and shade, conditions of sunlight, time of day, background, accessories and other details of that

character are not to be considered save as they appear of themselves. The whole thought of the operator is to get the particular view under whatever conditions present themselves. This will account for the crude appearance of many of the portraits and views seen in the public press."

Saving Silver


Many photo-engravers send their old silver waste to the refinery to be separated and fused. This of course, is effective, but it is expensive. Here is a simple method by which any photo-engraver can refine his own silver and get all the money that is coming to him: After collecting all the waste silver products in the shape of films, ashes, blotters, etc., put them into a granite-ware kettle and cover with hydrochloric acid. Then add an equal quantity of sulphuric acid. This will cause heat and a bad smell, but stir it well with a glass rod, pour into a glass jar and allow it to stand. It will divide into three sections. A heavy deposit will go to the bottom; on top there will be a thick scum and in between a comparatively clear fluid. Throw away the scum and the clear fluid and set the residue out to dry. Then mix it with five parts of charcoal (by weight), and seventy parts of sawdust. Now put it into a crucible and set in the stove where it will keep red hot for half an hour or so. You will find a button of silver in the bottom of the crucible that can be quickly converted into cash.

The New Enclosed Arc Lamps

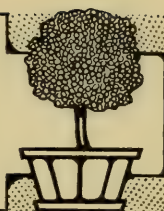
Great satisfaction is being expressed by the users of the new enclosed arc, or vacuum, lamps for photo-engravers. Several of these lamps have recently been installed here and are working with perfection. They use less current, burn less carbon and make the exposure in half the time usually required by the ordinary arc lamp. As these lamps burn in a partial vacuum they emit few hydrogen rays, which border on the yellow, but nearly all of the ultra violet which have greater actinic power on the plate than any other.

Answer to Query

J. D. Miller, Oakland: From your description I think your trouble is caused by over-exposure. Do the work with as little time as possible and the result will be clear.



A Photographic Digest



By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

What Are the Limits of Orthochromatism?

A few months ago a writer in *Photography* started a discussion on the above question by challenging the exuberant statements of the venders of orthochromatic plates and many of their backers. In the discussion that followed I took a part and presented a view of the subject that so far as I know has not received attention, and which I now reproduce for the consideration of American readers. The following is an extract from my letter to *Photography*:

"There is one aspect of orthochromatism that so far as my reading goes, has altogether escaped the consideration of writers, namely, the contention that I now make that in a large number of cases orthochromatism is undesirable. The object of orthochromatic rendering is to obtain true values, and the idea expressed, or underlying most writings thereon is that the nearer the plate comes to rendering the values truly, the better will be the representation of the subject. But this is often an entire mistake, as I will proceed to show.

"By values is meant the relative light intensities of an object as measured by the eye, and independently of color. Thus, two strongly contrasting colors may have the same value, that is, look equally light, or equally dark, and if expressed in black and white they would demand the same shade of gray for their true expression. But if such colors were in juxtaposition no artist in black and white would ever dream of so rendering them. He would sacrifice their values to preserve their contrast.

"Let us take an easily comprehended example: Ask an artist with an approved sense

of color to paint a yellow cross on a purple shield, using for the purpose tints of the same value. The contrast between the cross and its background would be startling. Now, let ideal orthochromatism do its best with this subject. The values of the yellow and the purple being exactly alike, and truly rendered, would affect the plate precisely to the same extent, and there would result a uniform gray image without a sign of a cross thereon. This is the *reductio ad absurdum* that awaits the application of perfect orthochromatism to the rendering of colors in monochrome.

"Now let us ask what the black and white artist would do with the example given, and the answer is: He would falsify the values until by rendering one color lighter and the other darker than it is, he would attain the sense of contrast which the colors, not the values, afford the eye. It should be distinctly recognized that what the eye chiefly appreciates in nature is contrast. This contrast may be either of color, or of light and shade, and when these contrasts are to be rendered in black and white it is just as necessary to preserve a color contrast as it is to preserve those of light and shade. They may go hand in hand, but quite often they do not, and then the nearest approximation to truth is obtained by sacrifice of values.

"I am not writing against the use of orthochromatic plates. Their good qualities are most valuable, and appreciating the fact, I am never without them. Nevertheless, it is quite wrong to imagine that they are always better than the ordinary kind. When the contrasts of the subject to be photographed are dependent on colors of near values, their use may be detrimental. I believe this last is often the case, and the

refusal of many eminent photographers and pictorialists to adopt generally the orthochromatic variety is not without its justification."

Antidotes for Poisons

Following are the latest means of neutralizing poisonous doses of certain chemicals that the photo-engraver is likely to get into his system. It will be well to remember them. Iodine: Three grains may prove fatal. Strong emetic at once (mustard is the best for this), then follow with small doses of starch. Mercury: Nothing is better than to get an egg from the printing-room, beat it up and give to patient. Nitric Acid: Two drams of this will generally prove fatal. If patient has not had too much, knock some of the plaster from the wall, mix it with water and make him swallow it. But be quick, as every second counts. Nitrate of Silver: Common salt is as good as anything. Bichromate of Potash: Should any of this get into a cut and cause a burning sensation pour some of the iron solution over it. Should it be swallowed give an emetic. Cyanide of Potash: Generally there is nothing more to do than to send for the Coroner, but some patients have been saved by giving them an emetic and keeping their heads and necks covered with chopped ice.

Photographing the Unseen

Apollo announces that according to information received, Professor Karl Zenger of Prague has succeeded in producing a collodion plate that, treated in a special manner with a preparation of uranium, has a remarkable sensibility in recording the invisible in stellar photography and the like. Most extraordinary developments are expected to follow fuller investigation of the possibilities of the process. The publication of full details is promised to follow.

A New Method of Intensification and Reduction

Last March J. S. Teape read a paper before a London photographic society on a method of intensification, a method which had previously been only partially developed, but one that was certainly new to the mass of photographers who were present. The paper seems to have attracted little attention until C. W. Sommerville took it up in the *English Amateur Photographer* of July, giving further details, the result of his own

investigation. Since then C. Welborne Piper and D. J. Carnegie have published a paper on the same process, speaking of it as "our process," although publishing it six months after the original lecture by Mr. Teape. However, be the credit due to whom it may, the process is undoubtedly the most valuable method of intensification that has ever been described. Briefly, the negative or bromide print is first bleached in a solution of potassium bichromate and hydrochloric acid, two to five per cent of the first and one per cent of the latter. The bleaching solution is then thoroughly removed by washing, and after a moment's exposure to strong light, the image is redeveloped with an ordinary developer. The intensification obtained is quite considerable, the image is free from stain, retaining its previous gradations, and consists solely of the original silver of the primary image. I have used the process very extensively for the past three months with unvarying success, and am investigating the nature of the remarkable change effected. The result of these studies together with some new applications of the process, I hope to place before you very shortly.

Printing in Silver and Gum

I have kept pretty close tab on the various modifications of gum printing in these pages. The following method published by Dr. Reiss in the *Revue Suisse de Photographie* is not to be included therein as it is not based on the action of bichromates on gum, nor does it contain solid pigment, nor can it well be capable of the free modification that gives value to gum-bichromate methods. In Dr. Reiss's process the paper is coated with a mixture of gum and silver nitrate, when dry it is printed, washed and fixed in hypo (two per cent), washed and toned. The coating mixture is made by working together in a mortar 5 c.c. of a 50 per cent solution of gum and 3 c.c. of glacial acetic acid, to this is added 1 gram of silver nitrate in 3 c.c. of water and the mixture put on the paper with a hog's-hair brush.

Blue-Toned Bromides

Professor Namias has an article on this subject in the current *Revue Suisse*. It is well known, he says, that a solution of molybdic acid treated with a reducer assumes a fine blue color. If an excess of an alkaline sulphite is added to a solution of molybdic acid with nitric or hydrochloric acid, the

liquid gradually turns blue, especially when exposed to light. A bromide print immersed in such a solution becomes little by little blue in color, feeble enough at first, but of an intense tint in ten or fifteen minutes. The print subsequently washed and dried has a deep blue color, which Professor Namias says is more agreeable than that which can be obtained by means of the ferric processes. It is at the same time slightly intensified. A good formula which he recommends is as follows: Twelve grains of molybdic acid are dissolved in half a dram of strong ammonia, and half a dram of water. A dram of nitric acid and a dram of water are added thereto, and the mixture forms the stock solution which keeps indefinitely. Immediately before use, a dram of this solution is diluted with three drams of water in which twelve grains of potassium metabisulphite have been dissolved. In this solution the print that is to be toned is immersed, preferably after having been soaked in water, and it is left therein until the desired color is reached.—*Photography*.

On Quinoline Red as a Preservative to Color Sensitive Plates

Various sensitizers for red sensitive plates suffer from disability in that they cause fogging and spottiness. This tendency can be lessened by the addition of other dyestuffs that are not themselves sensitizers, and among them quinoline red has recently been the subject of investigation by Dr. Miethe who published his results in the *Zeitschrift für Wissenschaftliche Photographie*. He finds that it acts thus with methyl red and ethylred nitrates as well as with orthochrome and König's pinachrome, and that plates which would otherwise be foggy, spotty and striped appear perfectly clear. As a working formula he gives the following examples:

Ethylcyanine nitrate (1-1000 + alcohol) .	10 c.c.
Quinoline red (1-1000 + alcohol)	50 c.c.
Water	500 c.c.
Ammonia	3 c.c.

Self-Luminous Photographs

The *Photographische Mittheilungen* (No. 7) gives the following directions for the making of plates or paper that after printing give pictures luminous in the dark: Ten grams of pure gelatine are dissolved in 50 c.c. of water and thereto is added 1 c.c. of glycerine and 30 grams of Balmain's lumi-

nous paint. This latter substance is an article of commerce and consists of calcium sulphide 1 part, sodium hyposulphite 1 part and bismuth oxide 0.003 of a part. The paper is coated with the warm emulsion in the usual manner.

To obtain a luminous picture the plate or paper coated as above is exposed under a transparency for a few minutes to sunlight. If a negative is used the luminous image will be negative in character. Advantage has been taken of this to duplicate negatives. Such a luminous negative print placed in contact with a dry plate in the printing-frame for a space of thirty seconds will on developing the latter give a new negative.

Clouds in Carbon Prints

Recently an inquirer in the pages of *Photography* asked for a means of printing in clouds in carbon prints, to which, after giving the usual method, the journal added the following excellent directions:

"Our own practice is to dispense with the masks by a method of working we have previously described. The landscape print is exposed, developed, and dried in the ordinary manner. The exposure is then made upon a second piece of carbon tissue, the lower edge being very roughly vignetted. The exposure must, however, be as short as may be compatible with getting a developable image. This piece of tissue is then squeegeed on top of the landscape print, and on development, which should be conducted in water at a very moderate temperature, it will be found that part of the sky print has overlapped the landscape portion.

"As, however, the gelatine is, by reason of the short exposure, in a very soluble condition, it is easily removed from the parts where it is not needed. The simplest plan is to lay the print in a dish of cold water and to remove the unnecessary parts of the image with a camel's-hair brush. An alternative method is to place the print on a sheet of glass and to use an artist's spray bottle to remove the pigmented gelatine. There is no risk of injuring the landscape image, as that has become insoluble by the alum bath through which it has passed.

"A sky, printed in in this manner, looks much more in harmony with nature than when it has been vignetted off by the ordinary methods, leaving a more or less wide band of white between it and the landscape."



Notes and Comment



Self-propelled Vehicles

A practical treatise with illustrations, by J. E. Homans, A. M., 8vo, pp. 672, bound in black vellum, gilt top, gold titles. Theo. Audel & Co., Educational Booksellers, New York, \$2.

There is a vast amount of useful information packed into its 644 pages, and it is so well arranged and so clearly stated that the reader cannot fail to find and comprehend.

The general principles of automobile construction and operation, including steering devices, underframes, wheels, tires, bearings, lubricators are included in the opening chapters. Then follows an exhaustive account of the theory, construction and operation of gas engines, occupying over 100 pages. Several typical engines are taken up and discussed separately, and their properties, as regards balance, speed and power, are discussed in the light of fundamental principles. The explanations of the governing devices are clear and valuable, while the discussion of ignition, including the hot-tube, and the primary and secondary sparks, cannot fail to prove of the utmost value.

All necessary information is given, and the merits of several types of steam carriage are fully set forth.

New Series of Cooke Lenses

These new Series II and Series IV, Cooke Anastigmats, are designed for high-speed photography, for the finest portraiture, and for difficult photographs in poor lights.

The Cooke lens has the advantage of an extremely simple construction. It consists of three thin glasses which obviously admit more light than does a combination of six, eight or nine. The difference in lighting is distinctly noticeable in practice, and we invite fair comparison between Cooke lenses and others of the same focus and aperture. We have a delicate screw-adjustment for our final corrections of the lens. Sensitive and efficient, the adjustment always remains rigid, and besides increasing accuracy, it is

immensely more durable than the old-fashioned balsam, with no disadvantage of any kind. With its help we can secure the most critical definition throughout the plate for which each lens is listed, and can attain one uniform excellence.

These advantages are fully developed in the new series, and result in objectives of greater rapidity and defining power, with a more uniform excellence than has hitherto been possible in lenses having these large apertures. The lenses numbered 22 and 23 in the Series II, excel for portraiture by the adjustability of the back glass. This enables the photographer to secure at will uniform sharp definition, or to diffuse any required softness evenly throughout the plate. The value of this device can best be appreciated by the professional photographer.

Amateur Portraiture by Flashlight

The above is the title of a most valuable and timely little book recently from the Kodak Press. It is written by William S. Ritch, a gentleman thoroughly conversant with the subject of which he treats. He not only understands fully the difficulties attending the successful production of good portraits by flashlight, using only the ordinary equipment of the amateur, but possesses as well a happy facility of imparting his knowledge to others in a plain and convincing manner. The book contains numerous illustrations and diagrams and is handsomely printed. Kodak dealers all have a supply, or one can be obtained directly from the Eastman Kodak Company, Rochester, New York, by enclosing ten cents with your request.

We understand that the Kodak Press is about to issue a little volume entitled "Book of the £1,000 Kodak Exhibition" in which will be reproduced some sixty pictures from among the best shown at the recent Kodak Exhibition in London. A copy may be had at 25 cents, either from the Kodak dealer or from the Eastman Kodak Co.

CAMERA CRAFT



San Francisco, California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CAL.



REVERIE
by W. J. PIATT



VOL. X.

SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1905.

No. 2

Spool-Silk Pictures, or Making the Camera Lie

By C. H. CLAUDY

Illustrated by the author

From the standpoint of interest alone, probably the most effective photographs are those commonly called snap-shots, on account of the life they portray. At the same time pictorial representation of live, active movement is, when accomplished by the snap-shot, almost invariably the result of a happy combination of circumstances. Nor is this at all to the discredit of the pictorial worker. No one can arrange his camera, compose his models and take his snap, in the instant of time usually available for such work. If you see a truly pictorial representation, for instance, of a horse-race, think you the credit should go to the photographer for anything more than the attempt? He didn't group the horses, arrange the light, nor see that the jockeys were gracefully posed. He didn't have time. If there is a successful portrayal of a game of tennis, or of baseball, which is pictorial, every one knows it is the best of a number of exposures, and that the natural grouping, according to the man-made laws of composition, is an accident and not from design. Leaving out all question of pictorial work, there are any number of subjects which would make effective pictures, or pleasing records, could we but get the motion to stop long enough for us to take the picture or to arrange some obtrusive details in a manner more to our liking. But, impossible though this may seem, it can be done, and if my title has not already told the story, I am ready to set forth the tale that those who run may read.

In the first place, let me give credit to the Editor of this magazine for the suggestion, for until his bright wits jogged my slow ones, so unique a method of stopping motion never entered my head. It is as follows: If you want to take a picture of a man batting a baseball—don't go to the game and take your chances—get a man, and a bat, and a ball, and a camera and spool of silk thread and pick out a secluded spot with the proper background and then. . . .

In the same way, make a picture of a child chasing a butterfly (see my own effort), or a fisherman whipping a trout stream with the trout jumping from the water (again look at my work), or a tennis player smashing a lob, or a dog catching a ball in his mouth or any one of a hundred and one such subjects.



"THE CHASE" IN THE MAKING

from the ground. To this end of the thread the butterfly was fastened. Little Gertrude was then invited to chase this butterfly, while Lewis gracefully (I have his word for it) waved the pole to and fro in the air. While my child-models were thus engaged I set up the camera, focused on a certain spot, put in plate-holder, and otherwise made ready to snap the picture,—for this is a true snap, in spite of the fact that it is a fake. At just the right moment, when little Gertrude was all unconscious that any one was ready for making the picture, and while Lewis "played" her as if she had been a little fish, I squeezed the bulb, with the result here shown. You can see that it is a very ordinary print from a very ordinary negative, and the man with the pole and the smile, and the somewhat chalky little girl have no suggestion of beauty to speak of. But if I am not demanding too many half-tones and the Editor will show you what I made of it, I am sure you will agree that it evidences ambition, even if your judgment dictates the sentence that it is not otherwise good. I have the less hesitation in calling attention to this piece of work, as my friend Fairman, with some reputation as a critic, says I spoiled "a most poetic bit of landscape to make,"—and I won't tell the rest! But I am sure every one will agree that the pose has action and life and no one need be told that butterflies will not fly where they are wanted to, unless, like mine, they are nice, biddable butterflies of cork and paper that will go whither they are directed.

The method is, in the telling, simplicity itself. Hang up your ball, or butterfly or fish or whatever it is, by the black silk thread, pose your model in the most life-like way possible and take your pictures in peace and comfort. Actually, there is more to be said on the subject, and the difficulties are not such as can be overcome in a moment. Perhaps the best way for me to prove this will be to set down a truthful account of just how these pictures presented here were made. In the first place then, I secured the loan of a little girl who is not afraid of the camera, and impressed into service my friend Lewis (himself a capable photographer), although he protested that he was too old for child's tricks! I took my camera, little girl, friend Lewis, spool of thread, tacks, fishing-pole and a lunch and went deep into the woods. Lewis had the butterfly, made of cork and paper, in his wallet. The string of thread was first fastened to the long fishing-pole and then cut off so that its end, when the pole was elevated in the air, came about five feet



"TWO POUNDS, ANYWAY!"



"THE CHASE"

Then we had lunch and went home. By this time friend Lewis was interested and offered his services willingly and cheerfully for the jumping fish picture. That he afterward said I seduced him into it, and that he wouldn't do it again for I don't know what fabulous sum, is another story. At any rate, on a certain pleasant Sunday morning, Lewis and I hied ourselves with camera and tripod and a fish, purchased the night before and carefully interred in ice, to a stream which flows not too far from our base of supplies. The idea we had in mind was to stretch a wire across the stream, and from the center of this wire suspend the thread with the fish on the end of it. The fish was to have a line in his mouth, which was to extend to the end of the fishing-pole that one of us was to hold, and he was to strike an attitude as nearly like that of an excited fisherman as his consciousness of the occasion would allow. So the first thing we did was to stretch the wire. That is, I stretched it. To do this, I removed my shoes and stockings and rolled up my trousers. Bravely I waded in, with good long strides and, I imagine, an appearance of great bravado. But I soon

reduced my stride to inches and my brave appearance to a cringing, crawling attitude,—for the bed was of sharp stones! In my childhood days I used to wade in any old kind of stream bottom and think nothing of it; but then my feet were tough and my weight was little. Now my feet are tender, from many years of shoes, and I weigh something like one hundred and ninety! But I managed to get across somehow, scrambled up the bank with the end of the wire and fastened it to a tree. Lewis fastened his end over a projecting branch and pulled it tight. Then I put the fish on the hook, the hook on the thread and the thread over the wire—and broke the wire! Three different times I waded that stream and stretched the wire and attached the fish, but it was no use. The wire wasn't strong enough, or the fish was too heavy. So we gave it up, and, while Lewis laughed, I tried to think of another way. This other way resolved itself into an attempt to find a tall tree, which grew out over the water. This we finally located, and then we enjoyed ourselves throwing stones, to which was attached a tail of black thread, over the tree and then trying to find the thread.

However this was finally accomplished, but not without much gritting of teeth and the calling of curses down upon the shades of my ancestors by Lewis, who had



"GOOD SPORT"

been compelled to wade on the sharp stones and had cut his feet, greatly to my unchristian delight. Next in order was the attaching of the fish. Fishy had a curved iron rod down his gullet to give him the curve we imagined a jumping fish should have. A small pin in the back of the fish attached him to the thread, and an ordinary fishhook fastened the line to his mouth. A few feet of line was allowed for slack, and then a brick was tied to it, to hold it down. The other end of the line was attached to the fishing-pole.

One of us managed the camera, the other posed as fisherman. The fisherman's duties were as follows: To hold the rod so that the line was tight, but not so taut as to move the sinker; lean forward and express muscular tension in the pose; throw a rock under the fish so the splash will drive away the flies; when the ripples have subsided, and before the flies come back, throw another rock, in just the right place, to make rings in the water to indicate the place from which the fish jumped; the minute the rock leaves his hand, resume pose with rod; look pretty. The other fellow's duties were easier,—boss the job, make fun of the victim, and press the bulb.

The results are before you. I have seen better pictures and I have seen worse, but these were good enough to fool several very good fishermen, who wondered and wondered how I had managed to be Johnny on the Spot with my camera when the fish jumped. They know, now, should this reach their eyes.

Well, we got back to dry land after a while, although that last fifty feet of wading was torture, and our feet were sore for a week. Next time we will wear tennis-shoes, and I most urgently advise you to do the same. They won't show, and neither will the bruises.

Of course there is a limit to the subjects possible to this means of tricking the camera, as silk thread will not support very heavy weights. It may be doubled or even tripled, if necessary, and still not show in the picture. Silk is very fine any way, and by the time it has been reduced in size eight or ten times and printed on a mat surface paper it is quite invisible, although it can be perceived on the negative by the aid of a strong glass.

But do not try to trick the instrument and your friends by this method unless you are willing to devote some time to it. Merely suspending some object which flies in the air and taking a picture of it will not serve. You must carefully think out the details, for you are attempting to simulate life and action, and the omission of some apparently unimportant detail may spoil the whole thing. A jumping fish which did not leave ripples in the water, would, for instance, be false on the face of it. Or a photograph of a hunter in the act of firing at a bird whose wings were closely folded, would be as unnatural as would a representation of a tennis-player or batter in the act of striking the ball, if the latter were shown too close to the bat or racket. The bat or racket touches the ball but an instant only, so the two should be some little distance apart in the picture. Attention to such small details, care in choosing the proper ground, and ingenuity, will enable the persevering to evolve some picturesque effects and cheat Nature by stopping motion where it is wanted.



BEDROOM AT "GREYSTONE ON HUDSON," SAMUEL J. TILDEN'S OLD RESIDENCE

Photographing Interiors

By CURTIS BELL

Illustrated by the author

The characteristics of different interiors are so varied that to cover the subject of photographing them in all their possible diversity would be an endless task. As a rule, such subjects contain sufficient contrast, but examples will be met with containing little or none. An exposure of a few seconds may suffice in a certain case, and in another, hours may be required. An interior that becomes the subject for our camera today, may, seemingly, have been arranged for the express purpose of being photographed. There will be no objectionable lines to combat, no undesirable lightings to be taken into consideration and no illogical arrangement of the furnishings to be disturbed. The view-point suggests itself at once in no unmistakable terms. An interior that may come before our lens on the following day, may present every possible difficulty in its most objectionable form. In fact, the possible difficulties will form an ever-increasing list as one's experience grows. Fortunately, methods of overcoming these drawbacks will discover themselves to the worker who applies himself to the task of photographing interiors. I should perhaps have mentioned earlier in this article that the word interior is here used in the photographic sense, a sense which is akin to that implied by purely commercial crafts, such as the house-furnisher and decorator. Artists use the term to describe a confined woodland scene or the like. As has been explained, the conditions under which we may be called upon to exercise our photographic skill in this direction are so varied that it would be difficult, if not impossible, for me to cover the subject in an article of reasonable length. For that reason I will confine myself to a few helpful hints, choosing, as far as possible, those which I believe will be most generally useful.

Line composition, judging from the lack of consideration which it is given in this class of subjects, even by those who are considered first-class photographers, demands our most careful consideration. Line is as easily handled here as in any other branch of photographic work, and a little study of the principles governing their use will well repay the worker desirous of improving his pictures. Study such examples as come before your observation and apply such knowledge of the subject as you may possess in locating the faults and discovering how, in each particular case, error might have been avoided. With an increased amount of such self-interrogation, one will find his appreciation of the skilful use of line, gradually increasing and his capabilities in that direction augmented. Until such appreciation has become an important factor in his work, one can at least avoid the absurd blunders that mar much of the work shown, such as columns innocent of support, arches supporting nothing more tangible than the upper margin of the print. Chairs and other pieces of furniture threateningly balanced upon one (visible) leg are not conducive to an appreciative enjoyment of the view. Equally, if not more disturbing, are windows or other high lights half within and half without the picture space.

The very nature of the subject prevents pure tonal treatment of interiors. A room is to be portrayed and not a portion. No one object can be emphasized to the exclusion of everything else. If it were, the resultant portrayal would not



DINING-ROOM—SENATOR DEPEW'S WASHINGTON RESIDENCE

Copyrighted 1902, by Curtis Bell

be that of an interior, but would instead become a picture of a clock, a table, or whatever this emphasized portion might be in this particular case. Despite this restriction, a room may be pleasingly portrayed and a beautiful tone preserved throughout, and when this is accomplished, together with the securing of careful line composition, the result will be one of the most pleasing and popular of photographs.

Only in the rarest of cases can rooms be photographed exactly as one finds them. By moving chairs, rugs and other furnishings, the improvement of the line, the subordination of over-assertive portions and the more harmonious relation of parts, can be secured. Not only this, but the avoidance of that conventionality of arrangement insisted upon by all good housekeepers can be accomplished. Sign or suggestion of life is also an important desideratum. Too many of the interiors we see reproduced suggest a room that we may perhaps have been shown as one used by some notable personage of the past, only to be primly arranged for inspection by the curious in the years that have intervened. The rooms which we are called upon to photograph are not, as a rule, of this description. They are inhabited by people who move about and enjoy a certain amount of freedom in so doing. An open book, a pot of flowers, a disarranged sofa-pillow, or a musical instrument in a position easily recognized as not unused, will often give that finishing touch that does so much to rob the picture of its formality.

The difficulties are lessened in all directions if a plate of smaller dimensions be used. A 5×7 plate being a most satisfactory size. Nevertheless, I believe the ideal plate for interior work is the eight by ten. A backed plate or one of the nonhalation variety is to be recommended in most cases. The question of orthochromatic emulsions and color screens must be determined for each individual occasion. Color luminosities that show good contrasts to the eye, may, when reduced to monochrome, even though correct color values be secured by the use of orthochromatic plates and color screens, seem lacking in contrast and displeasing in combination. As experience is gained this will at the same time become less and less a matter of experiment, and the advisability of employing the various conveniences placed at our disposal will be more easily determined.

As to lenses, the longer the focus the better, even if depth be sacrificed somewhat, providing the character of the room can be retained in the picture. Here and there one is compelled to resort to the extreme wide-angle type of lens, but even this, by careful handling, can be so employed as to yield a pleasing view free from distortion. The great secret of success in dealing with wide-angle lenses is to have no very prominent object very much nearer the camera than other objects of like importance; in other words, to deal as nearly as possible with plane surfaces. Exposures should be full. We hear a great deal about the increased latitude given by a slow plate on account of the more manageable, if longer, exposures required. There is another matter that influences the latitude much more than



AN INTERIOR—ARTHUR H. HAARN'S RESIDENCE



HALLWAY
by CURTIS BELL
Hon. Whitelaw Reid's Residence,
New York City.
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AN INTERIOR—"GREYSTONE ON HUDSON"

does this speed of the plate. I refer to the character of the subject before the lens. We all know how easy it is to over-expose on a subject having but little contrast. A bird's-eye view is an example in point. On the other hand, we may not have noticed the fact, but it is none the less true, that a subject containing excessive contrasts admits of a wide range of variations in the exposure. Interiors as a rule partake of the nature of this latter class of subjects. Contrasts are in almost all cases sufficient and in many, excessive. My advice on the subject of exposures is to give the longest exposure that your judgment will warrant and then, *as much more*.

In conclusion I would like to mention one quality which I try to secure in my own portrayal of interiors. It is that indescribable effect that gives the beholder of the picture a feeling of actually being in the room. We may call it atmosphere or what we may, but one thing is certain, it is secured in some cases, and, in others, one is given the impression that the picture was taken from some point well without the boundaries of the space portrayed. Other matters being satisfactory, this to me is the final test. Any picture of an interior that does not possess in some degree this feeling, will fail to give entire satisfaction.

The first three illustrations were made with a five and one-half inch Bausch & Lomb Zeiss lens, Series 5, on an 8x10 plate, and in spite of the great angle (over 100 degrees), no more distortion is *apparent* than in the other views all made with a ten and one-half inch Goerz, excepting "My Lady's Boudoir," on the next page, where a seven-inch Goerz was used.



"MY LADY'S BOUDOIR"

Skies and Clouds

Says George Clausen, A.R.A., in the *Strand*: "I do not think the beauty of landscape depends so much on the configuration of the ground or on the actual facts of any place as on the effects of light or atmosphere under which it may be seen. The finest view may look nothing at all on a bad day, and the most ordinary and commonplace scene may be made beautiful by its lighting. The chief element in a beautiful landscape (in Nature) is, I think, that there should be an extensive view, and the charm which this possesses for us is not so much that we can see so far and see so many things as that we can see the effect of light and of clouds upon the earth."

Another A.R.A., David Murray, one of the foremost landscape painters of the day, is quoted in the same article as saying: "I fully agree with Mr. Clausen as to the value of sky and clouds in a landscape." There is certainly food for thought in these two quotations, and the fact should not be overlooked that both these gentlemen have spoken of sky and clouds as they influence the landscape and not as being in themselves an important part of the picture.

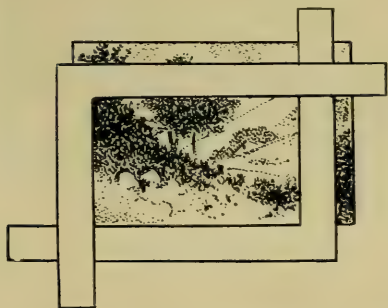
The Proper Mounting of Photographs

By GEORGE C. ELMBERGER

What is the use, the object, of a mount? The question is often asked: Why need a photograph be mounted at all? We never, or at least very seldom, see a painting mounted. This is because their size and character forbid mounting. It is, as a rule, very difficult to find a mount which would harmonize with the general color scheme of a painting. Photographs are usually mounted, except in the case of very large prints. It is a fact that small pictures are greatly improved by being suitably mounted and framed. Of framing I will not write at this time, reserving that subject for some future writing.

The object and purpose of a mount are twofold, viz: to isolate the picture from its surroundings, thereby courting notice, and also to emphasize its good points. There are very few photographs which are not greatly improved by being properly mounted. In selecting a mount we must always bear in mind, size and proportions, color and texture.

We will first consider what the proper size of a mount should be. To determine this will be almost impossible, but we will be able to give a fair idea of what size and shape we should use. In arriving at the proper size for a given sized photograph it is well to use some simple device such as the one I have been using for the last few years with excellent results. To make this guide, cut out two L-shaped pieces from some stout cardboard, as in illustration herewith. The long arm may be sixteen inches and the shorter eight inches in length. This, however, really depends upon the size the photographer usually works. Two or three inches in width will be ample. I prefer



to have one side of this guide white and the other dark brown or black. To use this guide, lay the trimmed print down on your mount in the center of your L-shaped guides, and move them back and forth, up or down, until a suitable proportion is discovered. This is easily accomplished after a little practice.

Now, as to the size of the mount to a given size of print. It will be agreed that what suits one picture might mean a serious defect in another. As a general rule it may be said: Avoid having the same proportions of mount and print. We know that the eye is attracted to lines, rows of points and the like, and tends to follow such lines. Therefore, if we mount an 8x10 print in the center of a 14x18 mount the corners of the print and mount will fall on a diagonal, hence, we may assume that the eye would be attracted either inward toward the center of the picture, or outward toward the outer extremes of the mount. The former may be allowable when we have a photograph with a well-balanced center but this is usually not the case. The latter we must severely avoid for reasons quite obvious. It is, therefore, better not to have the corners of the mount coincide with those of the picture.

We must also ascertain whether the proportion of length to breadth of mount should be greater or less than that of the print. This may be arrived at by the following simple rule: Where the print is nearly square and the object is one in which we desire to draw attention to or emphasize vertical lines, such results will be obtained by employing a mount in which the proportion of length to breadth is slightly less than that of the print, as in Figure 1. If we wish to emphasize our horizontal lines it is only necessary to select a mount where the proportion of length to breadth is larger than that of the print itself. (See Figure 2.) This is hard to make plain in print, yet it is really a very simple matter.

We now come to the texture of the mount, in other words, the smoothness or roughness of its surface. If we compare two pieces of glass, one highly polished, the other ground, we will note that the polished surface reflects much light but gathers little, while the rough glass (ground) reflects very little and gathers practically all the light reaching its surface. We may safely say that rough mounts scatter more light and consequently look lighter than do smooth ones of the same shade, influencing the picture accordingly.

Next, we must consider in which particular cases it is desirable to use a rough or smooth-surfaced mount. If we have a rough-grained print and we wish

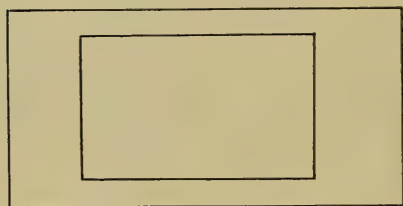


Fig. 1

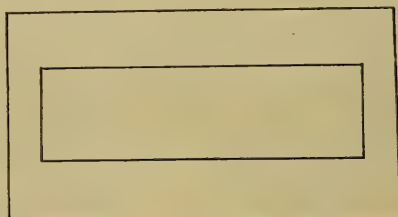


Fig. 2

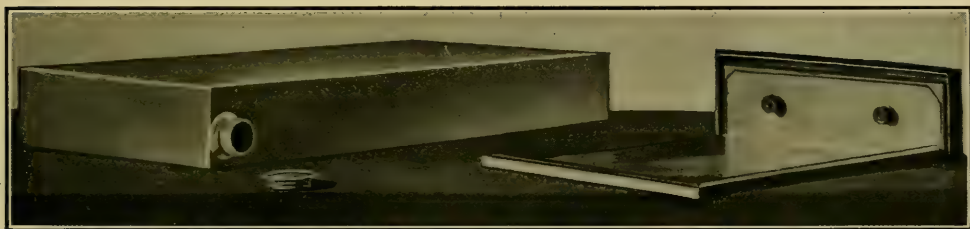
to emphasize this grain, all we need do is to use a rather smooth mount. It is to be noted that the smoother the mount is in connection with a rough-surfaced print the more the grain will be noticeable. If, however, we have a rough-surfaced print and do not wish this grain to be too conspicuous we should use a mount slightly rougher in surface than the print. Of course there is a limit to capabilities in this direction as with all other good things. Every one of us must use his personal judgment, hoping that he will strike the right thing. It is impossible to give an infallible rule on this point. We now come to the most difficult part; the selection of the proper color in the mount. In my opinion, we should not use pure white or deep black mounts, except for special effects. For instance, we have a print which is nearly snowy white (however rare that may be), and we wish to emphasize this whiteness, all we need do is to use a rather dark mount. The reverse would work equally well. These are extremes, of course.

Therefore, to obtain the best effects we should use for prints light in tone a mount only a trifle darker than the print itself. This can easily be proved by mounting a snow-scene on a dark card and another copy on a gray mount. Pictures where the darker tones predominate should always be mounted on low-toned mounts. One can generally use a great deal of latitude in the mounting of landscapes.

Daylight Developing Box for Glass Plates

By DR. C. H. GARDNER

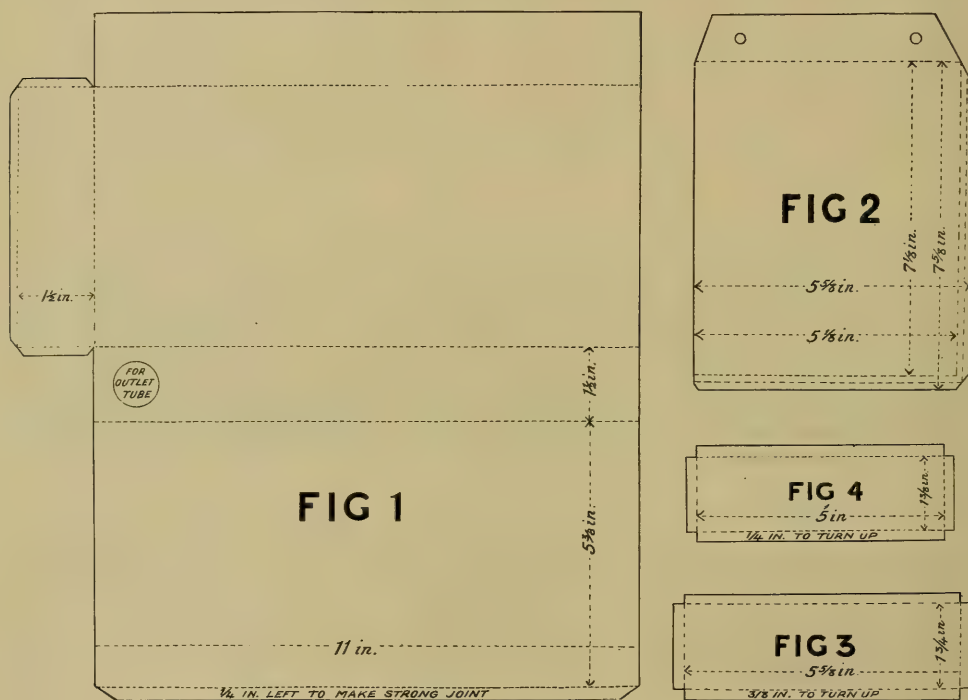
It has been proved that time and temperature are the most important factors in development. Since the Kodak developing machine is an admitted success, in which it is possible with a developer of uniform strength and temperature, to produce uniformly good negatives, it is quite as rational to expect as good results in the development of glass plates, providing the mechanical means are at hand for carrying on work upon the same principles. I have made for my own use a simple box which does this satisfactorily, though it could perhaps be improved in its mechanical details. This box is not bulky nor heavy (it weighs only twenty ounces, made for 5x7 plates), and is exceedingly simple in construction and operation. It is just the thing to carry on a summer outing if one wishes to develop his plates before he returns home. It is also more convenient to use at home than to develop in the dark. It must be loaded in the dark as a plate-holder is, but it takes no longer and the user of glass plates must at least load his holders in the dark. It seems best, however, to use it at night, as the plate can be transferred



to the box from the plate-holder in a darkened room without the aid of even a ruby light, care only being taken to exclude the light of lamps or other illuminants at that stage of the process. My box is made of sheet zinc, a metal which the developer, being an alkaline fluid, will not attack. It is long enough to take a 5x7 plate, and enough longer to hold eight ounces of developer in one end without touching the plate.

To use it, the box is held with the small or open end upward while the developer of the proper strength and temperature is poured in. The light is then excluded and the plate inserted in the carrier which is attached to the cover of the box. The carrier containing the plate is then slid into the box, still held upright, the cover falls into place and a clamp, somewhat like the one which holds the cover on a fruit jar, holds it fast and water-tight. The light may now be lit as the subsequent operations can all be carried on in safety in a well-lighted room, including the transfer of the plate to the fixing bath after the developer has been washed out of the film by two changes of water. To develop, the box, which has been standing upon its end during this time with the plate in position and containing the developer below it, is turned down on its side with a sort of sweeping motion to flow the developer evenly, though not with such force as to cause the formation of bubbles. The box is then gently rocked during the allotted time of development, at the expiration of which, it is again turned up on end and

the developer, which will collect at the bottom, is drawn off. This is done by removing a screw-cap from an opening in the end of the box. Two changes of wash water are introduced and drawn off by the same means, after which the box is opened in the light and the plate is removed to the fixing bath. The plate may be inspected before transferring to the fixing bath, but without any great delay, as there is a risk of fogging if the washing has not been thorough. For the amateur, such a box has the advantage over tank development in this, that he can develop a small number of plates with economy in the use of developer. It is simple in manipulation and the fact that it can be used at night without a dark room adapts it to the needs of many who have no such room available, as well as to the tourist who cannot always find one. It is not necessary to adopt a new developer with the box; use the one with which you are accustomed to work. To use it, first find



the time in which a negative of the required density will be produced with your developer at a standard temperature, and employing your favorite brand of plates. Failing in this, get some Kodak developing machine powders, and proceed according to directions. For cheapness and all-around service, they will commend themselves to the user of the box.

My own box is rather a crude affair, but others need not be so if the maker is handy with tools. If not, he had best get the tinsmith to make it for him under his direction. The box is made of sheet zinc, and for convenience of description may be divided into four parts: the box proper, the outlet tube, the cover, and the plate-carrier. The box proper is made of a piece the shape and dimensions given in Figure 1. It is bent up as indicated by the dotted lines to form a box, rather long, eleven inches, open at one end, with all joints soldered up water-tight.

For the outlet tube I found that a small bicycle hand-pump was the most convenient article at hand. Only the barrel of the pump was used, the piston or plunger being removed. The hole in the cap through which the piston worked, was soldered up and a rubber or leather washer put in to make it water-tight. A double row of holes was punched in the tube up to within one-half inch of the screw-cap. A hole was next made in the narrow side of the box near the closed end, just large enough to receive the tube, which was soldered in place leaving about three eighths of an inch of the screw-cap end sticking out. The holes in the tube must be directed back toward the closed end, because when the screw-cap is removed to drain off the developer and pour in the wash water, no light must be admitted.

The cover is made of two pieces of the shape shown in the diagram. The edges are bent up as indicated by the dotted lines and the joints soldered up tight. This makes two small shallow trays, one slightly larger and deeper than the other. One is inverted, the smaller placed in the larger, and fastened together with two small stove bolts. But first, a small block of wood is accurately fitted into the smaller one to stiffen it, and before it is fastened a piece of soft thin rubber such as is used in making washers is fitted into the larger. The plate-carrier is fashioned from a piece shaped as shown in the diagram and bent up as the dotted lines indicate. It may be fastened to the cover by the stove bolts spoken of above or it may be soldered on. I am using two stout rubber bands to hold the cover on my box, though a clamp such as is used in holding the cover on a fruit jar, may be devised for the purpose. The whole cost of the materials and the work of a tinsmith upon such a box should not exceed a couple of dollars, and would be still less if you are able to cut out the work, leaving the soldering to him. It will be found a great saver of time and trouble in the development of glass plates, and can of course be readily adapted to the development of cut films as well.



THE SEA

BY WILL H. WALKER



FLORA
by E. J. McCULLAGH
Instructor, Department of Operating.
California College of Photography.
Copyrighted 1900

A Plea for Copying

By HARRY L. SHEPHERD

Copying is one branch of photography which seems to prove too much for a great many amateurs. Just why this should be is in some cases a question hard to answer. In others it is due to want of care in several matters, such as focusing, or exposure and oftentimes development.

Some sort of copying stand will prove a great help and a time-saver. Here is one you can make in an hour. Two small shallow boxes of width from ten to twelve inches and a board of the same width about five feet long are the necessary requirements. Nail cleats to the lower sides of the boxes so that they can be slid along the board. To the end of one box nail a nice smooth board about fifteen inches wide and twenty-two inches high. This board is to have pinned to it the photograph or print to be copied. The other box is a "stand" for the camera to which the latter is attached by an ordinary tripod screw. Pin your photograph or print to be copied to the board so that the center of the print will be in a line with the center of the lens, and by the way, pin the print on the board upside down. Having fastened the camera to its "stand" so that the plane of the ground glass is parallel to the plane of the board to which the print is fastened, open the shutter and look on the ground glass. Move the camera or the box holding the print back and forth or extend the bellows till you get a good sharp image of the print to be copied. Sometimes in copying a faded print it will be hard to get an accurate focus. If this is the case, focus as well as you can to get the desired size of image on the ground glass and then pin over the print a piece of printed matter such as a leaf from a magazine, and on it secure your final focus.

A long focus camera is really the only camera to use for copying, but good work may be done with an ordinary bellows camera by using a supplementary copying lens. And now a few words from the school of experience on how to do it: Suppose you have a long focus camera and that you are copying a picture full size. In this case the bellows will be pretty well extended. Say the distance from diaphragm to ground glass is forty-four centimeters and that the diameter of the stop used is two centimeters. Then the real stop number, quite accurate enough for practical purposes, is $f\text{-}44$ divided by 2, or $f\text{-}22$; which in the Uniform System that most American cameras have marked on the shutter, would be U. S. stop number 32. Nine out of ten amateurs seem to forget the long extension of the bellows, reading the stop as it is marked on the shutter, and on developing the plate wonder why it was under-exposed. The way I overcame this difficulty is thus: I measure the diameter of each stop in centimeters, then when I have obtained a proper focus in copying I measure, just roughly, the distance from the ground glass to the diaphragm with a centimeter rule; then I divide that distance by the diameter of the stop I intend to use and this gives me the actual stop number in the f system. In that way I ascertain my stop number and by so doing can easily calculate the necessary exposure.

Yellow, brown, red, in fact any warm tone, requires for copying a longer exposure than black and white. In copying a faded or yellowish print an Iso plate

and a light-ray screen will help matters a great deal. As to the developer: I use hydroquinone alone or combined with metol and also pyro. If I use pyro I usually add one drop of bromide, ten per cent solution, to each ounce of developer. I do not confine myself to hard and fast rules. I try to get a negative which will give me the result I desire in the finished print. If I am copying a faded, flat photograph I try for contrast by giving just sufficient exposure and developing with hydroquinone or strong pyro, restrained with bromide, about two drops to the ounce of developer. If I am copying a contrasty black and white print I give full exposure and develop with metol-hydro or pyro, both somewhat diluted, but using no bromide with the pyro. In this way I secure nice negatives, not too contrasty. As in many other processes in photography, suit your plate, exposure and developer to the end you are working for. The slower brands of plates will, as a rule, prove more satisfactory for copying, having more latitude and giving greater contrast. Whatever brand of plates you use, stick to the manufacturer's formula in handling them. He knows what is best.

For making dainty souvenirs, copying is a potent factor. Dainty menu cards, score cards for card parties, dancing programs and the like can be turned out with little trouble and often with profit to the maker in a financial way. If you cannot do lettering well, do your work on a large scale and when it is copied on say a 4 by 5 plate it will look all right. If you do not have a chance to copy by daylight use artificial light, but be sure you have the light evenly distributed.



THE BRONCO BUSTER

BY T. W. TOLLMAN, SPOKANE, WASH.

A History of Postal Camera Clubs in the United States

By FAYETTE J. CLUTE

The Postal Photographic Club

To C. W. Canfield, who at the time was Secretary of the New York Amateur Photographic Society, all credit should be given for the formation of the first Postal Photographic Club of the United States. The Club is still in existence, and what is more to the point maintains the high standard to which its age entitles it, being at the present time the foremost club of its kind in this country. In February 1885, Mr. Canfield caused a letter to be published over his signature and giving his address as 1321 Broadway, New York, calling attention to "A proposed postal society to be called the 'Postal Photographic Society.'" This was replied to, a month later, by Professor E. L. French of Aurora, New York, and Mr. Canfield reported that such a number of responses had been received that the Club was a certainty.

Frederick C. Beach, Secretary pro tem, shortly announced the following prospectus together with a list of the officers and directors:

PROSPECTUS

This Club has been organized to afford to amateurs in all parts of the country an opportunity of communicating with each other. The general scheme consists in having each member contribute six or more specimens of work; these specimens to be arranged in albums by the Secretary, and to be sent from one member to the other, each member paying carriage to the next on the list. A note-book will accompany each album, and in this note-book each member will write criticisms on the work presented, and vote on a prize print. The management of the Club is in the hands of a committee of five members. The expenses are to be met by an admission fee of 50 cents and annual dues of \$2.00.

Ladies are eligible to membership, and this Club offers them an opportunity for correspondence in photographic work.

All interested are requested to communicate with the Secretary, Joseph S. Rich, 50 West 387th Street, New York, who will send a copy of the rules and furnish any information desired.

CHARLES W. CANFIELD, President,
JOSEPH S. RICH, Secretary and Treasurer,
FREDERICK C. BEACH,
H. V. PARSELL,
RANDALL SPAULDING.

Committee.

April 29th of the same year the first album was started containing nineteen prints contributed by A. H. Sherman, C. W. Canfield, H. McGill, Professor



"SEWIN' "
by F. WARREN SUMNER
Postal Photographic Club



THE REEF

BY JAMES L. JENKS
Postal Photographic Club

E. L. French, Randall Spaulding, J. E. Dumont, James M. Rich and Joseph S. Rich. The cover of this album was made of what is called "postoffice paper," which, together with the leaves, were perforated and the whole fastened together with a shoe-string. Three of the prints were on platinum and the remainder on the then popular albumen paper. The platinum prints which were contributed by the President, Mr. Canfield, are today in a state of perfect preservation after nearly twenty years have elapsed, while the others are in various stages of the fading process.

A year later the Club was reported as having a membership of twenty-eight, Professor E. L. French being Secretary and Messrs. Thurston, Cabot, Jackson and Zabuskie carrying off the honors in Album No. 9, which was devoted to flower studies. From this point, interest seemed to have waned, but early in December 1888, the Club was revived with Professor Randall Spaulding as President and Dr. J. Max Mueller of West Chester, Pennsylvania, Secretary. A new constitution was adopted and at the close of the year the Secretary reported that seven hundred and forty-two prints had been circulated through the medium of the albums. The re-election of Professor Spaulding and Dr. Mueller followed, and the enthusiasm of the members seems to have been maintained; Dr. Mueller retaining the office of Secretary until the end of 1901, William H. Wamsley of Philadelphia following him in that capacity. But two or three albums were circulated when the Club once more ceased active operations. April 15th, 1893, an album was started and the Club again became active, with Professor Randall once more President and F. E. Fairbanks of Fitchburg, Massachusetts, Secretary. From that date the Club has enjoyed uninterrupted activity. The membership has rarely fallen below the limit of forty, and for years there has always been a number of applicants upon

the waiting list. The present Secretary, G. A. Brandt, has served in that capacity since November 1899. F. O. Congdon of New York City resigning at that time, F. A. Marble of North Adams, Massachusetts, held the office after Mr. Fairbanks and until Mr. Brandt's election. Professor Randall was followed by Wilfred A. French of Boston, who in turn was followed by Albert J. LeBreton of Washington; the present incumbent, Charles E. Fairman succeeding him as President.

At first the albums were circulated by mail, hence the name of the Club. The growing membership resulted in note-books and albums of larger size, and the increased cost of postage compelled the abandonment of the mails as a vehicle of transmission. The packages, containing two albums, one on its initial trip and the other on its second round with a full complement of criticisms, often weigh as much as thirty pounds. The sending of the packages by express rendered it unadvisable to accept as members workers residing in extreme Southern States. The authorized membership of the Club is limited to but forty active members. At the present writing, time in several years, the waiting list contains but one or two names. Application for membership as well as full information concerning the objects of the Club, together with a copy of the rules applying to any of the members or to the Secretary, G. A. Brandt, 631 Maryland Ave., S. W., D. C.

The work of the Club rests almost entirely upon the shoulders of the Secretary to whom the prints are sent from time to time by the members. These are arranged in an album each



SHELLING PEAS

BY ROMEO S. BARSTOW
Postal Photographic Club

month; and at the

same time a note-book is prepared which contains full data concerning the making of each print and the negative from which it was made, each such heading being followed by sufficient blank space to permit each member in turn to make full criticism of the individual prints. Other space is given over to such helpful suggestions on photographic subjects that the members may feel moved to offer. On the first round of such albums, the names of the makers of the prints are omitted, thus rendering the artist incognito and affording scope for unprejudiced comment. Accompanying each album and its note-book is the album and now well-filled note-book of a previous month on its second round. At the time of starting the album the Secretary mails each member a printed bulletin giving the names of all the members in the form of a route list, together with such matters as he desires to bring to the notice of the members.

Before going forward to the matter of the albums and note-books I should mention that many of the foremost photographers in both the amateur and professional

ranks, have held membership in the Club. Miss Appleton, Miss Farnsworth and John E. Dumont are names well known to us all. Charles D. Arnold, of World's Fair fame, was a member for many years. Such of our present day active workers as Alfred Stieglitz and Mrs. Bennett are well remembered by their former associates in the Club. Other names make the list too long for the mention that they deserve.

One other, however, should be mentioned here. Quoting from a memorial issued by the Secretary:

"On the 26th of July, 1904, at Concord, Mass., Alfred Munroe, a member of the Postal Photographic Club, passed away to a better life, having attained the ripe old age of 88 years. The Club has lost a valued and beloved member and the Secretary mourns the loss of a very dear friend. About a year ago Mr. Munroe received a serious hurt, from the effects of which he never fully recovered. Prior to that time he had enjoyed vigorous health and bid fair to prolong his useful life for many more years.

"He was an artist of no mean ability, as evidenced by the fact that specimens of his work received the award of the Club for highest artistic merit. He contributed many interesting pictures of scenes in and about the historic old town of Concord, where his long and useful life was mainly spent.

"His nobleness of character, amiable disposition and fidelity to duty were traits that could not fail to impress themselves upon those so fortunate as to enjoy his acquaintance and friendship. Men possessing a combination of so many virtues are few and their work ought not to pass unrecognized."

Mr. Munroe's sight becoming impaired several years ago, he decided to withdraw, but his resignation was declined and he was made a life member. The only distinction of that kind ever granted by the Club.

On the next page is reproduced a print from the same album from which our other illustrations are taken, but with this I have reproduced a few of the criticisms under the corresponding title in the note-book. These note-book pages are ruled and printed to carry full data concerning each print; this particular one reading:

No. 5, subject: Fisherman's Home, by Miss Sarah J. Eddy. Euryscope lens; stop and exposure not recorded; time, 6 P. M.; light as shown, somewhat cloudy; Cramer plate; metol-hydro developer; platinum paper.

Criticisms—Fisherman's Home, by Miss Sarah J. Eddy

The portrayal of a very picturesque spot and one seemingly rich in pictorial possibilities. The main fault lies in the fact that too much has been included. One boat, and that one just around the point of land, would have been sufficient. The home itself is quaint and interesting; it alone would have made a picture. The sky is good in tone and harmonious.

FAIRMAN.

This impresses me as being a beautiful piece of photographic work, and one on which I could write even more than I shall. It has in it so much of what the photographer should do and so much of what he should avoid. It also illustrates many of the lamentable shortcomings of photography in difficult situations. I should enjoy placing this picture in the hands of a painter and asking him to paint the scene. It would be interesting to observe his method of overcoming the difficulties.



FISHERMAN'S HOME

BY MISS SARAH J. EDDY
Postal Photographic Club

In the first place, this picture is full of sentiment and for that reason well worth the taking. For this alone, we should overlook the defects.

The artist saw this scene and no doubt his first impression was that conveyed by the landlocked cove, making it pre-eminently suited to the "Fisherman's Home." Trimming from the bottom as has been suggested, cuts off the land and immediately destroys this sentiment.

It is unfortunate that the bit of beach at the bottom is detached from the rest of the picture by the line of light on the water; and that the rock on the right is similarly detached. If these could be brought more into the picture by local reduction or other means, improvement would result. The three boats I do not find objectionable in themselves as they add to the character of the picture, but it is unfortunate that they are separated, one from another, by approximately equal distances. If the second boat could have been moved under the stern of the larger one and the third brought nearer in, the arrangement would have been much better.

The most serious fault, however, lies in the symmetrical character of the view of the buildings. The top of the wall and the strong lines formed by the eaves of the buildings give practically three parallel lines of equal length and are entirely too assertive for a picture of this kind. This is of course unavoidable and the artist deserves great credit for having kept the walls as low in tone as he has, reducing the defect to the minimum. The dome-shaped outline of the clump of trees is also too symmetrical, enhanced as it is by the strong light behind it on the left.

The sky, while quite pretty in itself, should be sacrificed. I find the picture greatly improved by taking one and one-half inches from the top and forgetting that the sky was there. The general sentiment of the picture is one of quiet, coziness and rest. The sky is not conducive to this feeling. Bringing the dark of the mount down nearer to the top of the buildings adds to this sense of coziness and rest. The author deserves our commendation for having done so well and our sympathy in this, that there was no other point of view from which he might have secured what was wanted and omitted that which he did not desire.

YELLOTT.

This is pleasing and soft in tone. Rather too many objects included but being subdued in tone they do not catch the eye as badly as they might. If I were to suggest trimming I should say remove rock on extreme right and take an inch from the top.

JENKS.

In my opinion, the removal of the rock on the right would quite unbalance this. It is a very pleasing picture despite its few defects.

WASHBURN.

The spotty foreground too insistently claims the attention and were it mine I would trim an inch from the bottom.

SCHOULER.

I would prefer one inch trimmed from the bottom. I cannot agree with Brother Yellott that the sky detracts from the sentiment of the picture. If they were storm clouds they would undoubtedly dispel the feeling of "quiet, coziness and rest," but they are not. Some of Brother Yellott's other criticisms seem to me to be rather far-fetched, especially his discovery of the "parallel lines" and the "dome-shape" of the clump of trees. These faults are so trifling as not to interfere with my enjoyment of the picture as a whole.

PARK.



PASTORAL

BY J. WILL PALMER
Postal Photographic Club

Intensifying and Reducing

By EDWIN H. KEMP

To the beginner in photography the processes of reduction and intensification probably seem very complex and mysterious; and, moreover, he or she is more than likely to fear attempting them on account of the poisonous nature of some of the chemicals used. But knowing that they are poisons would naturally make any sensible person handle them so carefully that no possible danger could result, and therefore I will say that any of these operations can safely be attempted by any person of average intelligence, and that they should be used freely whenever necessary. It would be well to mention here that any negative that is to receive future treatment should not be hardened by any chemical such as alum, formaline, and the like. In this climate hardening is not a necessity except in rare instances.

We will take up reduction first. Its simplest use is for the purpose of thinning down a negative that has been over-developed and for that reason, too slow a printer. Looking at the negative we must decide whether the gradation of tone, or in other words, the light and shade, is correct, and select our reducing agent accordingly. In order to obtain the proper results from our dense negatives it is essential that we have at least three reducers, viz: a normal working one, one to produce contrast, and one which gives softness. For this purpose I have selected as being most desirable the following: Farmer's reducer, which is a mixture of ferricyanide of potash and hyposulphite of soda, to produce contrast; Agfa as a normal reducer, for preserving the gradation of half tone as near as possible; and persulphate of ammonium to increase softness or reduce contrast.

Take a negative that has evidently been over-exposed and over-developed, and therefore lacks a little in contrast, in order to increase which, one should select Farmer's reducer as having a tendency to increase contrast. To make this reducer, take a saturated solution of red prussiate of potash and a saturated solution of common hypo. Use a few ounces of water and add enough of the ferricyanide until it becomes a pale yellow, and then a small quantity of the hypo. I might say here that it will help a negative that has been dried to soak it in water for a short time, but the best time to have reduced it would have been immediately on its leaving the hypo bath. Supposing our negative to have come directly out of the fixing bath, we should have followed a little different method of procedure. Here I will call to your attention a peculiarity of Farmer's reducer, that is not generally known. If the reducing solution be strong in hypo and weak in ferricyanide we have one that will reduce more equally all over the negative, while if we make a bath strong in ferricyanide and weak in hypo we have a reducer that will attack the thin detail with much greater energy than it does the denser parts. Taking advantage of this property we should examine our negative on removing it from the hypo and if it simply requires reducing all over as equally as possible, take a few ounces of water and add about a dram of saturated solution of ferricyanide, and into this solution immerse the negative direct from the fixing bath. Should the negative however require a little extra contrast, wash it under the tap for some five minutes and then immerse in the same bath as before, adding a little more ferricyanide if it does not work quickly enough.

The Agfa reducer is a patented preparation put up in a very convenient form for ready use. The under side of the stopper forms a measuring glass, which being filled to the top with the powder, it is only necessary to add that amount to one and three-quarter ounces of water to form the reducing solution. It is especially useful in cases where negatives or positives have been over-developed without being fogged, the tendency to increase contrast being extremely slight. In using Agfa reducer it is very essential that the plate be thoroughly washed before putting it in the solution. It is also extremely important that distilled water be used in mixing the solution, otherwise a precipitate is formed. When mixing Agfa reducer the best plan is to drop the powder gradually into the water stirring meanwhile; failing in this, the substance is liable to cake, with the result that considerable time is lost. Should the negative have been dried before reducing, it will accelerate matters to soak it in water first in order to soften the gelatine. Slowness of action being one of the characteristics of this salt, reduction takes place slowly and evenly without any of the detail being lost as is the case in using Farmer's reducer previously described. It generally takes from ten to fifteen minutes to reduce any ordinary negative. One other property that is possessed by this reducer is its ability to reduce a negative that has been intensified by mercury and made too dense. For this purpose I would recommend that the reducer be diluted with twice its usual bulk of water. The same quantity of solution can be used for two or three negatives but its action becomes weaker each time.

We come now to the last of the three reducing agents, viz: persulphate of ammonium. Farmer's reducer as explained previously has the tendency to increase contrasts, Agfa to preserve practically an equal scale of gradation, while the reducer I shall now describe has a tendency exactly the reverse of Farmer's solution in this, that it will reduce contrasts of almost any extent to a practically flat negative, if the reduction be carried that far, and with only a very slight loss of detail. It is especially useful for all negatives made under trees or of white buildings when in contrast to dark foliage, flashlights and portraits of subjects in white dresses. Quite frequently a badly under-exposed negative can be made to yield quite an artistic looking print by the aid of this valuable salt. It is practically useless to attempt to use the salt on any negative that has been hardened with alum or formaline, and in any case the negative if it has been once dried should be soaked in water long enough to soften the gelatine. The working strength of the solution is best at from ten to fifteen grains to the ounce of water and here again it is preferable that distilled water be used.

When working with this reducer it is very convenient to use a glass-bottomed dish with a sheet of white paper under it, in order that the action of the reducer may be more carefully watched. As soon as the desired effect is attained the action of the reducer is stopped by immersing the plate in a ten per cent solution of sulphite of soda for about two minutes. The negative now takes on a pinkish color which becomes more intense if it be left too long in the sulphite. The plate should be well washed to make the operation complete. On account of the color produced, this reducer cannot be used on transparencies.

Before leaving the operation of reduction it would perhaps be well for me to mention the reduction of bromide paper. A bromide print that has very few high lights or no large mass of sky, can, if too dark, be successfully reduced with



BURNING BRUSH

BY J. WILL PALMER

Farmer's reducer provided it is diluted with about four times the usual amount of water. For lighter subjects and especially portraits, the Agfa reducer should always be used for the reason that it does not stain the paper. For this purpose it should be diluted with twice its bulk of water. The reduced print will be of a very pleasing, warm color.

There is still one more use which we have for reduction before taking up intensification. Should a negative be found, when developing, to have been over-exposed and therefore probably lacking in contrast when finished, my method of procedure would be as follows: Use a very contrasty developer such as Cramer's bromo-hydro and finish developing the plate in it until it is as dark on the back as it is on the surface and almost opaque when viewed by transmitted light. Immediately on leaving the fixing bath, rinse off well and put in a solution of Farmer's reducer rather strong in the ferricyanide. It will be necessary to wash off quite frequently and dip into the hypo bath for a moment before again returning it to the reducer. This must be kept up until the negative is quite thin when it will be found to possess considerable contrast, but if found lacking in contrast must be well washed, when it will be ready to be intensified by the mercury ammonia method which will be described later.

Intensification is too generally regarded as a mere process for emergencies and a possible means of making the best of a bad job, when for some reason a negative falls short of the required density; but in capable hands, or perhaps we should say with proper knowledge, intensification is a most valuable means of improvement, perhaps second only in importance to development. Intensification

is generally considered quite complex because a number of the methods involve two processes, the preliminary one of bleaching and an after process of blackening. And here we find the stumbling block which causes amateurs to experience more failures in attempts at intensification with mercury, than with any other process in photography. All these troubles can be made to disappear as if by magic by following the simple formula, "Start Right." The greater part of the failures, stains, fog, streaks and after troubles have their origin in lack of carefulness at the start, and the importance of the thorough preparation of the negative cannot be too strongly urged. In the first place it is absolutely essential that the negative must be thoroughly free from hypo, which freedom can only be obtained by most thorough washing. It is also equally as necessary that the negative be most thoroughly fixed before the washing; with these two operations carefully done, half the battle is won.

As in the previous process of reduction we had three agents producing various results, so in this process we shall require solutions producing various degrees of intensification. By this is meant the strengthening of the gradations of density in more or less degree over the negative so that it will give a more contrasty or brilliant print. I have selected for our three intensifiers for discussion: The bichloride of mercury method with ammonia as producing the maximum degree of contrast to be obtained under ordinary conditions; the mercuric iodide method of redevelopment, which is more easily followed when less degrees of intensification are desired; and last, the patent single solution intensifier Agfa when a still less degree of contrast is needed, and more particularly as being especially desirable for the intensification of positives.

To take up the first method, that of mercury and ammonia which is especially useful when copying line drawings or all subjects requiring strong contrasts, I previously stated that it was necessary to start right. Having obtained a well-washed negative it should be immersed in a saturated solution of mercuric chloride where it will immediately commence to whiten and the bleaching should be allowed to continue until it has gone clear through to the glass side of the negative. I do not recommend anything less than a thorough bleaching because my experience has been that results otherwise obtained are not so permanent. On examining this whitened image it will be found that it shows a great increase of deposit but is apparently more transparent than at first, making it necessary to change the color of the image to black, to obtain the desired opacity. Here again I must call your attention to the fact that in this process every operation must be thorough, therefore on taking the negative out of the intensifier before proceeding to blacken it, it is necessary to first wash it in running water for at least half an hour. I firmly believe that just as many failures occur right here in not washing sufficiently between processes as in not thoroughly freeing the negative from hypo before commencing. Thorough washing is also a great element in insuring the permanency or keeping qualities of the negative.

As this method was selected for producing the maximum degree of contrast we must select as the blackening agent liquid ammonia of 880 strength or what is commonly called in America, stronger water of ammonia. The right strength for our purpose will be one dram of this ammonia to one ounce of water. On flowing this over the well-washed negative the blackening will commence

immediately and must be continued until the last trace of whiteness has disappeared from the back. This operation must also be thorough. The blackened negative is now ready for its final washing which also must be thorough, with added emphasis on the word thorough. The use of sulphite of soda as a blackening agent gives no advantage over the next method we shall describe.

Before leaving bichloride of mercury which is also called corrosive sublimate, it would be well for me to mention that it is a poison; the antidote for which, if any one should be so unfortunate as to drink it, being a raw egg mixed in water and drank. The negative to be selected for mercuric iodide intensification is one full of detail but lacking strength and good printing qualities enough to give a nice brilliant print. I also ask you to note in this process an exception to my previous remarks on thoroughness in washing in this, that it is not so absolutely essential to free the negative from hypo before using this method. The formula for this intensifier is as follows:

Mercuric iodide	45 grains
Anhydrous sulphite	440 grains
Water	1 ounce

The negative to be intensified, on leaving the fixing bath, should be washed for about fifteen minutes in running water and then immersed in the solution. If dry, it is not necessary to wet it before intensifying. The action is rapid and regular and the gradual intensification can be easily followed by examining it against the light or using a glass dish as suggested before. If the action is too rapid it may be restrained by adding water. On leaving the intensifying bath the plate is briefly washed in running water and then immersed in some fresh developer prepared for ordinary use, such as pyro, hydroquinone, or the like. The process is completed by washing in the usual way.

We now come to the last of the three intensifying methods selected, viz: Agfa, which, as most of you are aware is a patented preparation, its chief recommendation being that intensification is absolutely complete in one manipulation. In my own experience I do not find that it increases contrast as much as the previous method, and therefore it is more especially useful on a negative fully timed with plenty of detail but lacking density enough to give it printing quality. The liquid solution is quite clear and of unlimited durability, simply having to be diluted with nine parts of water to be ready for use. When using this preparation it is very necessary that the negative be thoroughly washed to remove all traces of hypo, remembering the motto, "start right." The intensified image has a dark brown color and good printing quality. The maximum intensification obtainable is reached in twelve to fifteen minutes at the ordinary temperature and proceeds very gradually so that it can be readily watched.

If the negative is left in the intensifier after the maximum effect has been produced the opacity begins to diminish and the image when viewed by reflected light has a bleached appearance. Should this happen, it is only necessary to wash the negative very thoroughly in water and treat it with any ordinary fresh developer. It is well to mention that when looking through a negative so intensified, it may seem to the eye that very little improvement has taken place, but the precipitate



A JANUARY THAW

BY ADOLPH PETZOLD
Salon Club of America

produced by the intensifier on the image in place of the silver, is of a very non-actinic nature and on being thoroughly washed and dried will give very much better prints than before.

In England a favorite method of intensifying is with silver and it possibly has more capabilities in the way of building up a printable negative from a mere ghost of an image than any other. On account of the extreme care necessary in manipulation in order to prevent stain, it has been repeatedly frowned down by workers on this side of the pond; I suppose possibly because we are all in too much of a hurry over here and are satisfied with quicker and less troublesome methods, but the fact remains, nevertheless, that there is no more permanent process known or one with which greater possibilities exist, and it has always appeared strange to me that among careful workers and persons desiring absolutely the best results this method should not have been more generally used. If any reader is interested in the method I shall be pleased to supply a very good formula on application.

With regard to the intensification of bromide papers the mercurial method has always given me the best results, but it is necessary to give the paper most thorough washing both before and after intensification, in order to prevent yellowness. Royal Bromide is especially adaptable to this process and if the hypo should not be quite eliminated from the paper a very good sepia color results which as far



WINTER

BY JOSEPH R. IGLICK
First prize, California College of Photography Amateur Contest

as my experience goes, seems to be permanent. Agfa also gives a very pleasing sepia on bromide paper.

Regarding uranium methods of intensification I have not considered them for the reason that no two persons get the same results with any one formula, moreover, the reddish brown stain that occurs, renders it very difficult to judge when the necessary degree of intensification is arrived at. The patented preparations of Uranium-Bayer, seems to give most promise in this particular line. I have personally used this preparation on bromide paper and it gives a very odd, reddish brown tone particularly on the Royal Bromide, which would probably be very suitable for some subjects.

And now to conclude I will give as a final warning, a photographic motto which I read some time ago in a periodical: "Care will kill a cat; so will mercury in solution should he be mug enough to drink it."

In our report of the First American Photographic Salon in the last issue, the reproduction on page thirty-four was wrongly credited. The picture should be entitled "An April Fog, by Louis Fleckenstein." The mistake was made by our New York correspondent; was one easily made under the conditions which prevailed; these conditions also making it impossible for us to discover the error until too late.

Are Proofs Essential?

By E. J. McCULLAGH

Department of Operating, California College of Photography

(Extract from the forthcoming California College of Photography Souvenir.)



PORTRAIT OF MAROLD M. BY BERL IRVING
Second prize, C. C. of P. A. C.

operators to harmoniously and satisfactorily arrange, but about which the patron has a perfect right to dictate. Again, many such defects can be softened or obliterated by judicious retouching, and the untuned proof shows these quite as well as the most carefully finished picture.

In early day photography all the patron required was a good map of his form and features, but now it must be a characteristic and picturesque portrait; and this is well, for while it means more labor it also means more profit and the elevation of photography to an honored position among the professions, as witness the elegantly appointed studios and prosperous proprietors which mark the passing of the "garret artist." The making of several proofs of a subject is good evidence of your desire to please, makes the patron better satisfied with the ones he selects and enables you to levy an extra charge for finishing from several negatives. Selecting

Why show proofs? The painter, whom we ape, dislikes to show an unfinished picture, yet we do it gladly every day (at least those of us who have a sitting every day). If pictorial and decorative qualities were the only elements to be considered we could well afford to dispense with proofs and expect the public to rely on our ability to select the best; but as likeness is the desideratum in a portrait, the patron should be given some opportunity to pass judgment on the sittings before giving his order. There are many little personalities of dress, hair and facial expression that often defy the ability of the best



ALONG SHORE BY WM. NEUMANN
Tenth prize, C. C. of P. A. C.

only the best negatives, soften heavy lines, freckles, etc., proof on paper that permits of printing deep enough to show high lights and half tones without blocking or bronzing the shadows. Whether delivered in person or by mail enclose a neatly printed slip, worded somewhat as follows:

UNFINISHED PROOFS

Kindly return promptly all of them, marking those you wish finished. Necessary alterations carefully made.

Should you want a few extra fine ones for special friends, our water-color artist will reproduce exactly, on the finished picture, your gown, flesh, hair, and eyes.

When more than one proof is selected to be finished the price will be given upon inquiry.

"Return all of them," permits an opportunity to coax extra orders from proofs that would otherwise be rejected, though I consider it a good plan to allow the patron to retain proofs not ordered from, for, frequently, friends will take a liking to one or more and request one finished—and there's another order, but you had better stamp all proofs with your name. A ten-year-old boy can receive proofs and take orders, but a scientific, artful salesman will grasp the opportunity to create desire for better finish from several styles and a larger quantity than originally planned. The choicest of pictures will not always sell themselves.



ALONE WITH HIS TROUBLES

BY FRED A. ELLIOTT
Third prize, California College of Photography Amateur Contest

The Advantage of Using Anhydrous Sodium Sulphite



AN OLD SALT

BY WM. S. RICE
Fourth prize, C. C. of P. A. C.

On this subject *The Amateur Photographer* says: "Of late there has been a great deal written on the best conditions of using and keeping sulphite of soda, MM. Lumière and Seyewetz have followed up the subject, and the most important of their recent researches is a study of the action of air on the ordinary crystallized sulphite (*Moniteur de la Photographie*). They find in the greater number of cases, or at any rate when the atmosphere tends to dryness, that the change on exposure to air is not an oxidation but simply a dehydration, and by long exposure of the crystallized sulphite to dry air at the ordinary temperature it is possible to completely dehydrate it, and this without any notable proportion of sulphate being formed. From this it will be obvious that effloresced sulphite of soda

may have a very variable composition, and from this point of view, if from no other, there may be a considerable advantage in always using the real or anhydrous sulphite rather than the crystals.

"The crystallized sulphite of sodium consists of equal weights of water and anhydrous sulphite, an experimental fact which is stated or implied when we attribute to the crystalline salt the chemical formula $\text{Na}_2\text{SO}_3 \cdot 7\text{H}_2\text{O}$. When dissolved in water the product is as far as we know, identical whether the anhydrous or real sulphite is used or whether the crystallized salt is employed. Thus, for example, two ounces of crystalline sulphite, added to nine ounces of water, will give a solution identical with that obtained by dissolving one ounce of the pure, real or anhydrous sulphite in ten ounces of water. In making up solutions this must be remembered, as at the present time we sometimes find instructions to use sulphite of soda (or sodium sulphite), and at other times the instructions are to use the crystallized salt (or crystals). Considering that the difference in strength is so considerable, and that there may frequently be mistakes, it might be well if the crystallized salt were banished from photographic use, and simple, plain, real, or anhydrous sulphite of soda were alone used, and this quite apart from that advantage of sulphite of soda over crystallized sulphite of soda which is insisted upon by MM. Lumière and Seyewetz.

"The above paragraph may serve as a text for reminding the non-chemical reader that some salts, but not all salts, when crystallized from water, take up a certain proportion of water and form with it a solid dry compound."

Further Notes from Mr. Zimmerman

In Re Article, "The Eastman Sepia Paper,"
in Our Last Issue



THE HAYSEED

BY MRS. MACIE M. RIZER
Eighth prize, C. C. of P. A. C.

Since writing the original article, I have experimented by using the toning bath made decidedly warm, and find that very fine tones are obtained thereby. I have not tested this process as to permanency, but have no doubt that with the other directions followed, there will be no chemical change produced which could cause deterioration.

I had a call today from an amateur who stated that he had read my article on "Sepia Paper," in the January CAMERA CRAFT, that he had followed the directions implicitly, but obtained bad, yellow tones. I showed him the prints which were being produced in large numbers in my studio; the color and gradations of tones of which, he admitted, were magnificent. I then went over the very simple process with him and found that, although he used a warm toner, he had kept the prints in the bath for the whole ten seconds mentioned in the article. He had

overlooked the direction given; that the print must be plunged in clean, running water at *the moment when the change in color had become uniform*. The explanation is: That when the chemical change had once been completed (which is almost instantly with a warm toner), any further effect of hypo decomposes the sensitive coating. For this reason, the quick action with the stronger solution, as formulated in the article, produces better and more lasting results than the slow process directed by the makers of the paper. Let any one who has a liking for experiments make two identical prints, washing both for fifteen minutes and at the same time toning one by the new directions, strictly followed, and the other by the old, with weak hypo, for five to ten minutes. Compare the two, not only at first, but after six months' exposure to daylight, marking each at the time of making, of course, for distinction. I would be pleased to hear from any one interested and desirous of corresponding on the subject.



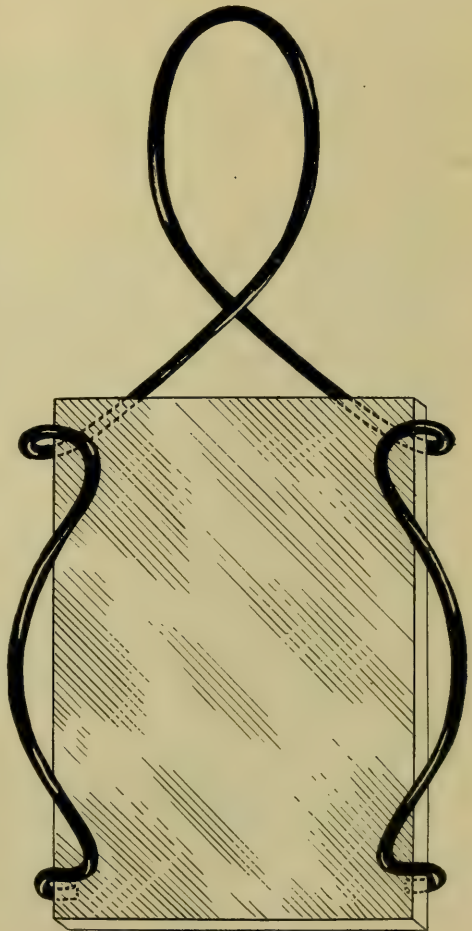
A Few Wrinkles

By WILLIAM THUNEN

We all know the unfortunate results that follow slow or unequal drying of our negatives. A negative that has required too long a time in drying is never as brilliant as one that has been dried quickly; and in a warm, damp atmosphere pitting of the emulsion is often the result. If a negative be dried at one stage of the operation faster than at another, the two portions will be of different density and drying marks will result. I will give my method of drying negatives, which is the simplest and most effective that I have been able to find.

Never use an old fixing bath. A fresh solution that has not become charged with silver removed from plates previously fixed in it, has a certain amount of hardening action. An acid fixing bath is better, and unless one often has recourse to intensification or reduction, it is advised. Do not be afraid to leave the plate in the fixing bath for some time after the unreduced silver has apparently been removed. The first action of the hypo is to reduce this salt to an insoluble and transparent chemical, further action being required to render it soluble and capable of being removed in the washing to follow. You perhaps have negatives which have developed a most objectionable brown spot near the center of the plate a few months after being made. That spot was the last portion of the negative to lose its whiteness in the fixing bath, but the negative was removed before the further action of the hypo solution could make it soluble. Do not delude yourself that it is hypo that causes the trouble. Take a waste negative from a fresh fixing bath, give it a very superficial washing and place aside to dry and you will find it free from stains years afterward.

To return to our drying; after the negative is well fixed and washed, place it in a hanger like the one illustrated herewith. These hangers are easily made, requiring only a minimum amount of skill and a pair of round-nosed pliers. A hanger for a five by seven plate requires a piece of wire about thirty inches long, preferably galvanized telegraph wire as it does not rust and has the desired amount of spring. The illustration renders description well-nigh unnecessary, but I might explain that the outward curve of

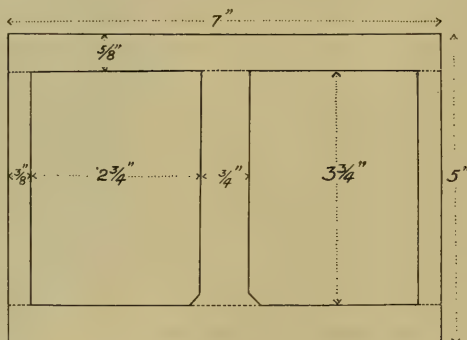


the wire at the sides of the plate is so made in order to permit the fingers to hold the plate while inserting or removing it from the holder. About fourteen inches of the wire is consumed in the loop at the top so that the necessary spring may be secured. It is evident that pressure on the sides of this loop will cause the holder to open and release the negative.

All the water possible should be removed from the negative before placing aside to dry. Wet a piece of absorbent cotton and wring it nearly dry. Give it a broad, thin, chisel-like shape and use it as a mop on the face of the negative, removing the water by again wringing out the cotton from time to time. Do not roll it into a ball as it is liable to damage the film and is not as effective in that form. By means of the loop in the hanger the negative may be suspended on a nail or even on a small twig on a tree. By using a small S-shaped hook a clothes-line becomes available and this is perhaps one of the best places for drying if the weather be favorable, and the sun is not allowed to reach the negative while damp.

A mat that is a great convenience in printing from stereoscopic negatives may be made as follows: Take a stout piece of paper, that used as the outer envelope for sensitized paper is good, and carefully mark out a rectangle, five by seven inches in size. Draw

rectangle, length-an inch from each these lines draw two each two and three-and three and three. There should be inch space at each fourths of an inch two upright rectangle of the larger an inch at both top two lines across this wise, five eighths of side, and between upright rectangles, fourth inches wide fourth inches long. three eighths of an end and three space between the angles and the out-one. Five eighths of and bottom are provided for by the two horizontal lines. Cut out these two inside rectangles, using a sharp knife and a ruler, but in doing so leave two tiny triangular pieces in one of two opposite inside corners of each. The diagram herewith will make the matter perfectly clear. Such a mat is intended for use with a five by seven plate and a separation of the lenses of about three and one-half inches; the prints to be two and three-fourth inches wide and to be mounted on a card four inches in width.



In trimming the prints, after this mat has been used in printing, it is only necessary to remove the white margin, and in mounting them there is no danger of mistake, as one need only see that the two "snipped off" corners are placed toward the ends of the card. Doing this it is impossible to get them reversed. In cutting the mat it is advisable that several be prepared with the openings exactly the same but with different proportional widths of paper at top and bottom. One may occasionally have a negative from which it will be desirable to print from a higher or lower portion to correct undesirable relation between the foreground and sky. By using a five by eight printing-frame the negative or mat can be shifted either to one end or the other, allowing one to secure better centering of the view when the most desirable selection was not secured in making the exposure. While on

the subject I will advise that in photographing distant views stereoscopically the advice given by Sanford Robinson, in an article in *CAMERA CRAFT* for November, 1902, should be followed. In that article he advised the separation of the lenses should be in accordance with the distance of the object photographed. For very distant objects or views, a separation of several yards is none too much. Take the view from the right-hand position with the left-hand lens covered with the focusing cloth or a cap. Move to the left-hand position and again expose with the right-hand lens covered. Use the mat in printing exactly as if the negative were one taken in the ordinary way.

Scratches in the surface or the small bubbles which we occasionally find in the glass of our negatives will often give undesirable markings if printing is done in the ordinary way. By pasting a piece of semitransparent paper, such as that in which sensitized paper is usually wrapped, over the face of the printing-frame these markings will be avoided in the print except in very rare cases where the bubble is a most objectionable one situated in that surface of the glass next to the film.



THE EVENING RETURN OF THE COWS

Fifth prize, California College of Photography Amateur Contest

BY F. E. BRONSON

The Question of Exposure

By NEWTON E. ARNOLD

The reader of the above title, be he an old hand with the bulb or finger-release, will say: What a hackneyed subject! But does this one subject of all the many that I could take, ever become really threadbare? I hardly think so. Is there any real knowledge, any definite information, or any possible method of always giving an exact, unswerving and undeniably correct exposure? Is there one among the thousands who read *CAMERA CRAFT* who can give a correct exposure under every condition that may be confronted? I am afraid there are not many.

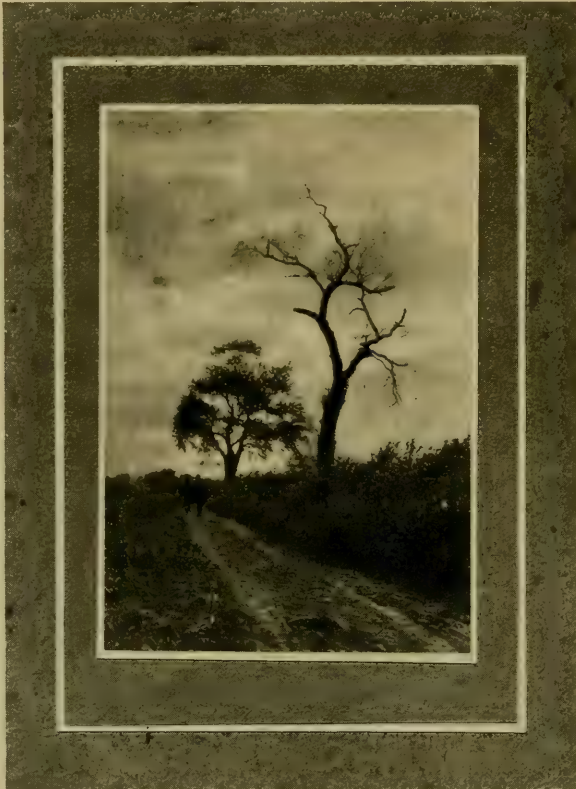
It is not to attempt the of any hard or to point out road. I shall effort to cata- the facts that proper appre- difficulties to make the so difficult and the lia- so great. It full under- these condi- is able to ap- subject with degree of sat-

One great is the seeming the amateur great range of which the or- will give him connection ous stops. We speak quite

a "snap." A "snap" may be anything from one tenth to one ninetieth of a second. No very great range in that you will say, but what of the stops? Figure it out for yourself. One ninetieth of a second with stop $f/64$ is equal to less than one five-thousandth part of a second with stop $f/8$. Quite a variation you will admit. Of course this is all dependent upon the shutter giving the speeds for which it may be marked.

But how near do these shutters of ours come to giving the indicated exposures? They do not come within a mile of the mark. It is an easy matter to set up a bicycle wheel, or even one improvised out of a few pieces of lath nailed to a block

my intention setting down and fast rules, any royal only make an logue a few of enter into a ciation of the that combine question one of solution bility of error is only by a standing of tions that one proach the any marked isfaction. cause of error ignorance of concerning the exposure dinary shutter when used in with his vari- hear him recklessly of



A NOVEMBER DAY

BY WM. H. ZERBE, JR.

that can be bored out to serve as a hub, and photograph it while timed so as to be revolving at the rate of one revolution a second. A bright object fastened at the rim will give a photographic image of a length equal to that fraction of a second which is equal to the proportional part of the circumference of the circle represented by the image. Do not be surprised if your shutter shows but an exposure of one thirtieth of a second when set for one ninetieth, or if the same shutter should show almost the same speed when set for one tenth. It is this uncertainty of our shutters that makes the use of any form of exposure meter or table seem so much like a waste of time. It is much as if you determined by careful research that a certain chemical experiment required at a specified stage of the proceedings an addition of an exact number of grains to insure success, and then attempted to weigh out these grains with weights of which you knew nothing.

There is another matter to which we give little thought, and that is the amount of light and shade which combine to make our picture. I was out with a couple of amateurs recently, and we found a bend in a pretty stream with wooded banks. By setting up our camera directly upon a tour around which the stream with the sun shining full upon the water from the camera. Exposure meters were called into use and determined upon according to its readings. The exposure made, a quarter of a turn were directed up this time being side, and the foliage on one side being in deep shadow. As might



MENDING SOCKS

BY J. WILL PALMER

be expected the same exposure was right. The camera was standing just where it did before, the light had not changed and there was the same condition of fairly open landscape with foliage close at hand. The last exposure should have had at least ten times the exposure that was given the first. On another occasion I was photographing a suburban residence for a gentleman whose family numbered several amateur photographers among them. They were all very much interested in the use of the large stand-camera, and during the work one of them discovered that I was giving exposures of varying length in order "to be sure of getting one of them right," as I heard one explain to the other. Having grown quite friendly with my fellow camera users I made bold to ask how it had been noticed as I had no intention of so doing. It was explained that I had given a very quick exposure on the front of the house, and used the cap to give an exposure of several seconds to a view taken from the side. I took my new friends around and explained the

other matter to the thought, and of light and shade make our picture. couple of amateurs found a bend in a wooded banks. By eras directly upon around which the tour a view could stream with the sun the water from the camera. Ex-called into use and determined upon readings. The ex-quarter of a turn were directed up this time being side, and the fol-being in deep be expected the

matter. As we stood almost in front of the house the best part of the plate was filled with a white surface upon which the sun was shining brightly. True, a dark tree near the side of the plate was darker in color, but its glossy leaves reflected a great amount of light. Changing our position to the side of the house, what a change! The plate here had but a strip of the highly lighted front to handle, but the major portion of the view was the side of the house in shadow and the side of the tree that, being in shade, reflected practically no light whatever. I explained that I had given half a second to the view taken from the first position, and for good reasons multiplied the time by five in taking the view of the side in shadow.

Another factor that we too often are either ignorant of or else ignore, is the great difference that may exist between the actinic value of the light and its apparent or visual power. The exposure tables tell us that we must lengthen our exposures quite materially for "sun obscured by clouds." This is sometimes the case, and again it is otherwise. The sun may be entirely hidden from view and yet, shining from behind the clouds upon the right kind of a sky in another quarter of the heavens, be reflected so strongly that for all practical purposes the same exposure will give as good results as would be the case were the position of the clouds such that no reflection took place, but the uninterrupted rays of the sun fell upon the view. I believe that it can be demonstrated beyond a doubt that exposing for the shadows and developing for the high lights is the only correct method. Admitting this, it is still easier to understand why an ordinary landscape, uniformly lighted by reflected light falling from an extended portion of the sky, should require less real light action on the plate than would the same view lighted by direct rays of the sun and with the attending deep shadows that were not a part of the first conditions.

I will mention one more factor which we too often lose sight of in our work, and then bring this article to a close. I refer to the necessity for more exactitude in the timing of the exposure on flat subjects and distant views than on subjects close at hand or containing a wide range of contrasts. Ascend the most convenient elevation and photograph such a view as will show the figures in the foreground as being about the size of a letter "i" in this page. You will find, particularly if it be attempted with the sun directly at your back, that only one certain length of exposure will give you the best result. Take your camera into the house or under the shade of a well-timbered glen and you will find you can, being sure of sufficient exposure in both cases, give two exposures of greatly varying durations and yet secure good negatives from both plates. The chemical behavior of the plate seems to favor this increased latitude that we certainly have in subjects containing good contrasts. I have never heard it explained, but there is certainly a difference that it is well to take into consideration in attempting to settle "the question of exposure." In compounding our developer this tendency of the plate to increase flatness in subjects lacking contrast should be taken into consideration and our knowledge and experience so employed that, knowing the type of subject upon which the plate has been exposed, the most satisfactory results may be secured. It is not to be expected that a developer properly balanced to secure the best results on a contrasty subject will be equally suited to one that demands all the contrast that it is possible to secure.



CAMERA CRAFT

ISSUED MONTHLY BY

The Camera Craft Publishing Company

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. X.

SAN FRANCISCO, CALIFORNIA, FEBRUARY, 1905.

No. 2

A More Satisfactory Condition at Hand

While not speaking with any authority, CAMERA CRAFT feels that it can assure those interested in the advancement of the aims of pictorial photography that dissension will grow less and less within their ranks. In any movement and in every concert of effort are to be found radical spirits who can bide no dissent, be it real or imaginary. Their expressions of dissatisfaction may, for a time, eclipse the more conservative and more temperate counselings of the better element within the body. Only for a time does this maintain. This is particularly true when the general movement is for that which is both stable and sincere. We believe that it is a question of but a short time when these facts will be appreciated, and it remains only for those with the real interest of our art at heart to encourage and assist to the full a return to a more dignified position. Any sacrifice in this direction will not, as they may fear, indicate a relinquishment of ground already won; at least, not in the minds of those who appreciate the full dignity that can be ours only when we adopt those methods which make for such a desirable recognition.

The First American Salon and Its Status

CAMERA CRAFT, at this distance, is not in a position to say with authority just how the Salon compared with others of the past; neither would our own estimation of our capabilities as a critic permit us to decide as to the quality of the work shown with that assumption of finality that seems to characterize the judgment of many whose chief claim to attention lies in the fact that they have access to printer's ink. That opinions have varied and that reports have been conflicting is but natural. A calm survey of the situation, however, reveals the fact that most of the derogatory and discrediting matter has taken the form of criticism directed at the building in which the Salon was held. This is quite significant. The value of the weapons at the disposal of those who seek to belittle the work is at once established. The fact that an organization less than a year old has been

able to secure so representative an exhibition and display it in quarters, the rental of which for the two weeks occupied amounted to more than the annual rental of many of the leading clubs of the country, should be satisfactory proof of its zeal and enterprise. The rental of the only other available housing against which no question of fitness could be raised is exactly \$1,000 a week. Knowing as we do the history of organizations with which many of these self-elected critics have been identified, it is interesting to note how chastely dithyrambic they can suddenly become at finding a photographic exhibition and signs of commercialism temporarily associated in the same building, when a small matter of an extra \$1,100.00 could have prevented.

Copies of the February, 1904, Issue Wanted


We are entirely out of the issue for February, 1904, and desire to secure a few copies for binding. Any one sending us a copy of CAMERA CRAFT for February, 1904, with the reading matter and frontispiece in good condition, can have his subscription extended for six months, or by sending fifty cents at the same time can secure a year's subscription, the magazine being sent to any address desired. We have many requests for bound volumes of the last year's issues and hence this liberal offer.

Our Last Issue Out of Print


At this writing, not a copy of the January issue of CAMERA CRAFT is obtainable, despite the fact that an additional thousand was printed. Subscribers who wish their numbers to start with January should place their orders at once. It is hoped that the forwarding of the present issue will result in the return of a few unsold copies from dealers who may have increased their orders above their actual requirements. If we are so fortunate, these copies will be retained for our actual subscribers, and those sending for sample copies will receive one of the back numbers containing sixteen pages less of original reading matter than do the issues of the present volume.

The California College of Photography

Through the courtesy of Mr. Dudley, we are allowed to make advance publication of one of the several valuable contributions that will appear in their forthcoming souvenir, together with reproductions of those of the prize-winning pictures in their Amateur Contest which are capable of being reproduced. From the list of prize winners published in our advertising pages it will be seen how widespread was the interest in this competition. When it is remembered that the announcement of this competition was practically confined to the pages of CAMERA CRAFT, the value of this publication as a means of securing publicity can be appreciated. The same reproductions of prize-winning pictures will appear in the souvenir, together with a criticism by an authority on both the art and technical aspects of photography. Every photographer should secure a copy of this valuable and interesting book which will be off the press before the next issue of CAMERA CRAFT is mailed.



A Photographic Digest



By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Oil Printing

A new process has been described by S. E. Rawlins in the English *Amateur Photographer*, for October the 18th, that promises great things. It is, in reality, a development, or modification, of the old collotype process and was described in principle by Poitevin over fifty years ago. It depends upon the fact that if a sheet of paper is coated with bichromated gelatine and printed under a negative, and then immersed in water, it will absorb the latter in an inverse proportion to the action of the light, thus producing an image in relief; if printer's ink be now applied to this with an ordinary printer's roller, or (according to his later writings) a common roller squeegee, the ink will adhere and build up an image on the wet paper that, when dry, is permanent. Furthermore, and here is the great value of the process, the depth of the printing, both generally and locally, is entirely dependent on the amount of ink applied and the manipulation of the roller; moreover, if the result be unsatisfactory the ink can be wiped off, and the pigmenting started over again. We thus have a method that seems to offer more complete control than gum-bichromate. If we may judge from the reports of those who saw Rawlins' results at the London Camera Club, where the process was demonstrated, and by the reproductions in the *Amateur Photographer*, the quality of the prints must be excellent.

The technique as given by Mr. Rawlins in his first paper, is as follows:

"To prepare for work take, with the palette knife, small quantities of paint of the required colors, after having removed the

outer skin, as directed on each stick. (Only the most trifling amount is required for each print.) Place it on a piece of glass (such as an old half-plate negative) by way of a palette, adding a few drops of turpentine, and rub them together until perfectly smooth and of the consistency of thick cream, free from all lumps and bits. Spread it roughly all over the palette, then take the roller and roll it in the paint, covering it and the palette evenly and thoroughly. Continue rolling thus for a few minutes, when the turpentine will have evaporated almost entirely.

"Now lift the printed basis from the water in which it has been soaking, and lay it face up on the slab of plate glass. Allow the superfluous water to drain away for a minute, and then with a clean, fluffless cloth, dab and wipe the surface until it looks dry. Take a little sponge or rag and daub a little of the mixed paint on to it, and, having placed a few drops of turpentine on the center of the print, rub it all over the surface until it is more or less evenly smeared with a thin layer of paint. Smudges and markings are of no account—it is only necessary to go over every part. When the turpentine has mostly evaporated, and the sponge begins to "drag," take the roller, and, having freshly passed it over the palette a few times, commence to roll the print from the bottom to the top. (Prints should always be made on basis about an inch longer than the picture, so as to leave a margin at the bottom which can be held down during rolling.) After a few strokes the picture will begin to show, faintly at first, but with continued rolling it will be gradually built up until it has reached its full natural strength,

the pigment adhering, as previously explained, in proportion to the light action.

"The first print illustrating this article was produced in this way, and left at this stage. But such a print forms a foundation on which we can work to almost unlimited extent, dependent largely upon the condition of the paint, with regard to its stiffness, at the moment of application.

"Thus, in order to produce an increase in contrast the paint must be as stiff as possible; whereas, if a flat result is desired, it may be much more nearly liquid. This variation I find it most convenient to produce by the use of the stiffest possible paint to start with, and thinning it down with turpentine, which may then be allowed to evaporate until the required consistency is reached.

"But whatever the consistency of the paint, it may be applied not only with the roller; perhaps the most potent possibilities of control lie in the stenciling brushes, for by their aid the paint may be applied with the greatest variety of effect, and not only generally but locally. The use of these brushes, however, requires practice, since there is a certain knack involved in getting the desired result; and, although this is not easy to describe, it is, perhaps, possible to give a slight idea of the manner of using them, so that a few trials will probably result in some measure of success. The brush must be perpendicular with the print. It is held *very lightly* between the thumb, first and second fingers, the last named touching it at the side of the handle nearest to the body and low down close to the bristles. Supporting it in this way about an inch above the print, it is dropped, following it downward with the hand, and instantly, on touching the print, it is again lightly grasped and lifted to its former position, and the action repeated as rapidly as possible. In this way the print is tapped, or dabbed, wherever required. If the action is light the paint will be spread more evenly with a tendency to flatness, while a sharp, half-drop, half-throw action picks the paint off, with an increase of contrasts. But whichever effect is produced, the *drawing is in no way affected*, unless this is desired and aimed for, in which case the paint can be entirely or partly removed with a rag or pointed sticks or brushes.

"Or, if it should be unsatisfactory in any way, the whole of the pigment may be

easily taken off by means of the sponge and a few drops of turpentine, and the rolling-up repeated."

The paint referred to in the above is the "Raffaelli solid oil color," but since then the author states that better results are obtainable with ordinary printer's ink. Whether this should be thinned (if necessary) with turpentine or boiled linseed oil, seems still *sub judice*. Another writer has suggested the use of dry color, ground on a muller, and linseed oil as placing the color and shade entirely within the power of the operator. Finally, the gelatinized paper can be made by immersing "single transfer" paper, for carbon work, in a saturated solution of potassium bichromate and drying in the dark. Print as in carbon.

A New Carbon Process

Drs. Riebensahm and Posseltdt, of Berlin, have patented a modification of the carbon process, the essentials of which are as follows: A gelatine-bromide emulsion is mixed with a pigment and coated on paper, which is then exposed, developed, and fixed, and washed as usual, the result being a silver image embedded in a gelatine film containing a pigment. The print is immersed in solution of potassium bichromate, and where the silver image lies the gelatine is tanned or hardened. The print is then washed and developed with warm water. One may have reasonable doubts as to the validity of this patent, for Howard Farmer, 1894, pointed out the principle of the process and showed before the R.P.S. the catalytic action of finely divided silver in the presence of gelatine and bichromate. The advantages of the new process of which exact details are not yet forthcoming are that it combines the rapidity of the bromide process, with the ordinary carbon process.—*British Journal of Photography*.

The Dark Room When Traveling

Sir William Abney, in a recent article to *Photography*, among other matters referred to the question of developing pictures away from home, as follows:

"One final word about light for the dark room abroad, when one develops at night in one's bedroom or sitting-room. Most hotels are now lighted with electricity. On the present occasion we have a holder to which we have some six yards of double strand wire attached, and at the other end

a lamp-holder fixed on a three-inch, flat wooden disk. The lamp is detached from the hotel fixing and the dummy connection inserted in its stead, the lamp itself being transferred to the portable lamp-holder. We thus have a light which can be placed in any corner or on any table, and when shielded with a double cylinder of canary-yellow and orange paper, and a loose top of the same material, is perfectly safe for any plate, whether it be pinachrome, spectrum, or orthochromatic, provided that it be placed at a proper distance from the developing table. At one hotel we used a "sixteen-candle" lamp, placing it on a table some twelve feet away from the developing dish. The light over all the walls of the room was ample to see by, and by turning the back to the light, the plates or films could be placed in the dishes for development and covered up, and when the image began to appear, the full light gave no veil. With orthochromatic films, the intervention of the body between the lantern and the strips, whilst they were wet in a basin, was quite sufficient to avoid any trace of fog, which, however, was slightly present when the films were drawn through the water in the full light."

Celluloid Formulæ

Celluloid is invaluable to the photographer, therefore, the following formulæ from an article in the *Scientific American* should be useful to many of us:

"If it be merely required to bend it, it will suffice to place the celluloid in boiling water. If, however, it be steamed at a temperature of about 150 degrees Fahrenheit, it becomes so soft as to permit of its being kneaded like dough, and so enable wood, metal, or other material to be embedded in it. When scraped fine and mixed with 90 per cent of alcohol it assumes the character of a cement, suitable for joining pieces of celluloid together. If it be required to make a solution suitable for varnish, etc., a choice may be made of the following formulæ: (1) Five grams of celluloid, with sixteen grams each of amyl acetate, acetone, and sulphuric ether; (2) celluloid ten grams, camphor four grams, sulphuric ether, acetone, and amyl acetate thirty grams each; (3) five grams each of celluloid and camphor and fifty of alcohol; (4) five grams of celluloid in the same quantity of amyl acetate; (5) five

grams celluloid and twenty-five grams each of amyl acetate and acetone. If celluloid be dipped in water just about as hot as the hand can bear, it will soften sufficiently to enable it to be hammered without injury. We may note that we have seen a recommendation to dissolve celluloid in acetone alone to form a varnish; it is perfectly soluble in that menstruum, but, with all the samples of acetone we have tried, the result has been useless, as the varnish so made dries "papery" or white, just like collodion made with pyroxyline from too weak acids."

Photographing the Sea-Bottom

Two years ago I spent much time, when on my summer vacation, attempting to photograph the flora and fauna of the rock pools of the coast. My plan then was to use a short-focus lens and get as close as I could to the objects, but do as I would I could not avoid the disturbing effects of the constant surface ripples. A recent letter by the Rev. J. M. Bacon to the English *Morning Post*, anent the hunting for sunken torpedo-boats at the bottom of the North Sea, has made me suspect that I followed the wrong method. This writer says:

"There is another method, however, of making a survey of the sea-bottom which is comparatively little known, and which does not seem to have suggested itself, though it could be adopted at a mere nominal expense and without any delay whatever. This method is that of photographing the actual shallows from a sufficient height overhead, and its practicability was fully tested by me two years ago in an experiment carried out, with the co-operation of the Admiralty, over the Irish Sea. It was precisely at this time of year, only in stormy weather and murky air, that objects on the sea-bottom were clearly photographed, though lying at ten fathoms below the water's surface, and that surface strongly ruffled by a wind which had blown hard for a whole week. The photographic survey thus secured was, it should be mentioned, submitted for inspection both to the Admiralty and to the Royal Society, and none but favorable criticism was passed on the results obtained. The photography in this particular case was carried out by a balloon, maneuvered across the sea, while a torpedo-gunboat was in attendance to render any assistance that might be required. In the case of the Dogger Bank, however, a readier and a far less

expensive means could be adopted, which can be best understood when the rationale of the experiment has been explained.

"It may not be generally known that in ordinary navigation, when some danger, as, for instance, a shoal, sunken wreck, or the like, is suspected of lying in a vessel's course but cannot be seen from deck, it is customary to send a man aloft, and the higher in reason that he can climb, the further will his vision penetrate and the better will his eye command the view of any submerged object. And the cause of this may in part be at once made plain, for every one has noticed that in obedience to the laws of refraction, even in the clearest pool, it is only objects lying nearly vertically below which are seen with any distinctness, so that if, say, a sunken vessel were lying in a few fathoms of water and a man were looking down on it from a boat and floating somewhere just over its middle part, then that middle part might be fairly well seen, but the more distant parts fore and aft, being viewed at a slant angle, would probably be altogether invisible. If the observer were to be let up a quarter of a mile into the sky, however, and to look down thence, all parts of the vessel would now lie practically perpendicularly below and all would be equally well seen. The case is, of course, different when the surface of the water, being troubled, breaks up the rays which would otherwise pass through it. But the fact yet remains that when the eye is removed to a distance the distraction caused by the broken light largely disappears, and objects below can be seen more clearly."

To this is added the suggestion that the disturbance of the surface may be overcome by the pouring of a very small quantity of oil on the surface of the water. Next summer, when I hope to be again at the coast, I will see what a telephoto and oil will do to the crabs and anemones.

Carbon Velours Paper

This paper, often known as Artigue, is obtainable commercially, and like Lesson and other papers of its class, is developed by warm water charged with boxwood sawdust, sago or other material. As I can personally vouch from what I saw in Paris last summer the results given by these papers are particularly beautiful. I doubt whether

they are obtainable in America, so that the following formula taken from the English *Amateur Photographer* may be useful to those desiring to experiment:

"Five parts of white of egg are beaten thoroughly with one part of a 1 to 3 gum mucilage, and the mixture is pigmented sufficiently to give a nearly opaque coating on paper. A few drops of ammonia are added, and the mixture is brushed uniformly on the paper, a sized paper being best. Any required stock of variously pigmented papers may be kept at hand in the insensitive condition, and when required for use a sheet is selected, and sensitized by being floated, face upward, on a five per cent solution of potassium bichromate."

Toning Transparencies

M. A. Le May (*Bull. Soc. Phot. France*), gives the following method of gold toning: Bleach the transparency in a bath of potassium bichromate 5 grams, acid hydrochloric 3 cc., water 100 cc. Wash and expose to light until image is darkened, then tone in chloride of gold 0.50, sodium acetate 6 grams, water 250 cc.

Exposure Time for Papers of the Velox Class

Speaking at the recent congress of French photographic societies, M. Leopold Löbel made the following approximate estimates of normal exposure for a medium negative: "Diffused daylight, between six and seven feet inside a window, 1 to 10 seconds; paraffin lamp, at six inches, 10 to 15 minutes; bat's wing gas-burner at similar distance, 8 to 12 minutes; incandescent gaslight, $\frac{1}{2}$ to $1\frac{1}{2}$ minutes; incandescent electric light (16 candle), 7 to 10 minutes. M. Löbel strongly recommends magnesium ribbon as a source of light, from $\frac{1}{2}$ to $1\frac{1}{2}$ inches giving a normal exposure at a distance of about 20 inches, the cost being quite trifling, as so little is used. The following tones are obtained by varying the time of exposure: Normal, blue-black or greenish black; twice, olive-green; three times, sepia; four times, brown; six times, red-brown; eight times, yellowish brown; ten times, red chalk; twenty times, yellow. As the exposure increases, the developer must be diluted with from five to forty parts of water.



The Amateur and His Troubles



By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

Spots on Aristo-Platino

A correspondent in the southern part of the State sent me some mounted prints this week that showed discoloration in spots. They were a new kind of difficulty to me and I could not locate the trouble. Finally, I soaked one off the mount in order to run it through a weak acid bath with a hope of determining the nature of the discoloration but I was saved the trouble. Directly under each spot was found a fermented patch of mountant. At least, the mountant under the spot was discolored either by the formation of a gas due to dampness coming in contact with acid preservative in the mount or by the fermentation of the paste, due to too slow or incomplete drying. I found out that these spots had only made their appearance since the last damp weather began, and the photographer admitted that he had been in the habit of stacking up the prints as fast as mounted, using little regard to the humidity. Laying the prints out to dry and seeing that the air which is not too damp, has thorough access, will prevent the same trouble in the future, I am most certain.

Making Panoramic Negatives

A friend came to me the other day in a no small quantity because he could not make a set of three negatives that would join up to make a panorama. He had tried all kinds of schemes, several different lenses, and yet they would fit together only at the middle of each end. He had decided that all the lenses were guilty of giving distortion at the ends of the plate. Of course they fitted at the center of the ends, and as the top was blank sky it was impossible to say

there was distortion there, but the foregrounds would not join up, do what he might. I looked the outfit over and asked him to set it up, just as it had been used. It was easy to locate the trouble. Instead of the tripod screw upon which the camera swung around being directly under the lens, or at least near that point, it was directly under the back of the camera with the lens some sixteen inches in front of this point of swing. We took a piece of board and made a couple of cleats against which the camera could be pressed before inserting the tripod screw through it into the old socket, and then bored a new hole to engage the tripod screw passing through the tripod top, the hole being bored in such a place that it came almost directly under the lens. The next set of panoramic negatives matched up as fine as one could wish.

Home Portraiture

I suppose a large number of my readers tried their hand at home portraiture during the last summer, but realize or rather believe that the winter light is too slow for further work in that direction. Admitting that it is too weak for snaps at babies or elderly people, it is not too weak for making a few experiments. It ought to be an easy matter to enlist the services of a model who will enjoy the work and the possibility of a few prints keenly enough to pose as your subject for an occasional hour or so. While the directions and diagrams given in the magazines are all very good, I believe there is a better method of learning what results follow certain efforts. Block off the lower half of your ordinary window and then place your sitter three or four feet from the light and a little back of the center of illumination.

Mark on the floor four positions for the camera. The first one close against the wall containing the window; the second a few feet into the room and the other two in such a position that they form, with the first two, a part of a circle around the point where the sitter is to be seated. With the sitter looking almost directly at the light, expose a plate from each of the four positions. Turn the head slightly away from the light and again expose four plates. Still further turning the head, duplicate the exposures and then make four more exposures from the selected standpoints with the sitter looking almost directly away from the light into the room. A few will be fairly good portraits and a number will be good examples of what not to do, but each will teach you a lesson that will be of the greatest value in your future work.

Judging Exposure by the Ground Glass

I wonder where all the valuable information that is passing current, originates. Certainly not with the practical worker. Another correspondent has written that he has been advised to judge the exposure required by observing the brilliancy of the image on the ground glass after the working stop has been inserted; but in trying to do so he fails to make much headway. The advice is poor. One might as well try to measure the dimensions of a room with a piece of rubber tape; in fact, the latter experiment would be the more practical because rubber has one normal condition of contraction while the human eye can hardly be said to assume the same amount of contraction of its iris, under other than identically similar conditions of light. The eye automatically adjusts itself to the varying brilliancy of the light, and does so in such a manner that one is entirely unconscious of its real power in that direction. After spending a few moments indoors, sufficient to allow the eyes to adjust themselves to the diminished light, one will find that the illumination of the objects seen upon the ground glass will appear nearly as great as did that of other objects out of doors, where one hundredth part of the exposure required for the interior would have sufficed. It is this automatic adjustability of the human eyes that render them most misleading in determining the amount of illumination reflected upon the ground glass from

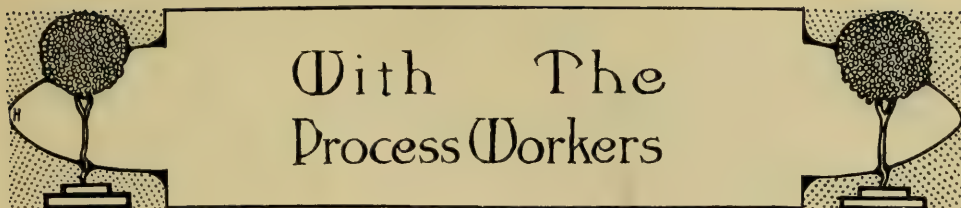
the subject before the camera. When this lack of reliability is coupled with the fact that the visual brilliancy is far from being a reliable measure of the chemical activity of any certain light, there is little wonder that my correspondent is not perfecting himself at a very rapid rate in the judging of correct exposure by this method.

In Behalf of a Small Camera

Just about so often I try to persuade some beginner to use a small instrument a while longer. It seems they all start with an instrument of modest dimensions, but soon want to make something larger. Right here is where I come in with my advice to go in for enlarging. That is all right, and the poor victim starts off to see what an enlarging apparatus will cost. Well, it does cost something, but he overlooks one fact, and quite an important one at that. In changing from his four by five camera to an eight by ten, and following his same ideas as to composing the view on the ground glass, he would simply be getting his smaller views on the enlarged scale demanded by the larger plate. He has no right to ask any more of his enlarging apparatus. If he does not, the matter is very simple. All he wants is a box of tapering form with some means of holding his negatives at one end, and a plate-holder that can easily be used for bromide paper, at the other. Of course the distances will have to be calculated, but that is not a difficult matter, and once done the position of negative, lens and paper can easily be arranged so that the full four by five image on the negative will exactly fill an eight by ten plate or sheet of bromide paper. The lens that is used on the smaller camera will answer every purpose, and the arranging of some method of making the exposure with a cloth-covered wooden flap working from the outside of the box, is as easy as can well be imagined.

A Carbon Printing Trouble

A correspondent in Iowa complains in a recent letter that the tissue on the last few sheets in the package refused to leave the paper in the hot water. His trouble is due to the fact that the tissue has become insoluble. He should either keep it in a box containing chloride of calcium or sensitize the tissue but a day or two before using. By doing this his difficulty will be overcome.



By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Intensifying Wet Plates

Edwin C. Stark, Stanford University, writes: "I am using the wet plate method of making lantern-slides, but have great difficulty in getting an intensifier that is permanent and will give brilliant results. Redeveloping or intensifying with silver is permanent, but takes time. The mercury-iodide of potassium method is satisfactory but is not permanent, even though I add one to the other only in sufficient quantity to redissolve the red color. It gives a brilliant slide and is quickly applied. I wish to ask for the formula of an intensifier that works as easily and is permanent. I have tried sulphuret of potassium and uranium nitrate, neither of which work with the brilliancy of the mercury. Perhaps I am at fault in my handling of the mercury—do not wash them long enough before applying or something of that sort. I cut my slides with cyanide. The slides lose their brilliancy in a year or two usually."

Answer: Your trouble is that of nearly all workers with the wet-plate process and I am inclined to think due to the same old cause—lack of cleanliness. The best intensifier you can find is the one you say takes too much time—nitrate of silver. Stick to that and make an effort to gain facility in the manipulation and I think you will be satisfied. The mercury-iodide intensifier is not considered as absolutely permanent but if you wash your plates well and do the work with care and cleanliness the slides should keep their brilliancy many years unless they

are used a good deal. I know of some that were made ten years ago and they are as good now as they ever were. The uranium intensifier is generally considered satisfactory. It is permanent and simpler and gives a pleasing soft color. But for this reason you need a stronger impression on your plate to begin with. Make your silver bath very acid, use an old collodion and give a longer exposure and development. Cut it very clean with cyanide, wash it at least fifteen minutes and then use your uranium. This should give you a first-class slide. But be sure your glass is clean and test your tap water for impurities.

Abuse of the Lining Beveler

There is little doubt but that a judicious use of the lining beveler does help the general appearance of some cuts. But a good deal depends upon where the cut is to be used. In decorative advertising it is all right but on a page of printed matter the result is generally pretty bad. I have seen cuts in the past six months that have been completely ruined by the use of this machine. To put a wide border on a cut and rule lines around it really calls for a certain amount of artistic ability that is not generally found in the mounting department. If you have one of these machines be very careful with it. At present it is the most abused piece of apparatus in the photo-engraving shop. In the Eastern cities its indiscriminate use amounts to an epidemic.

The Three-Color Process

Although the so-called three-color process has been in general use for several years many engravers have very little idea of what it really is. I know that one of the most successful workers on the coast does not know just what he is doing when he makes a set of color blocks. And I must say I think that is the reason that his work is "uneven." He will produce one set of blocks that it would be hard to beat, and then will follow a lot of work calculated to make profane language necessary. The present stage of the three-color process calls for some brains, but it may be that in a few years it will reach a point where cuts can be turned out in a mechanical manner. It is on the present foundation that it will be considered as the other is not even visible in the distance yet. The English process of collodion emulsion comes very near it and produces uniform results of a high order, but the process itself is so difficult that all other advantages are lost. To make three-color cuts we have got to think, which means that we have to know what we are doing and why. It is the intention to explain in this column all the different practical methods that have been successful up to the beginning of 1905. But in order to understand them we will have to begin at the beginning.

This brings us to the question: What is color? And the answer is that no one knows. This may sound strange, but it's a fact that we don't know what color is any more than we know what electricity is. And as far as we know, except for certain effects on our organs of sight, there is no such thing as color.

But we do know that there is such a thing as "ether vibration." That is, certain chemicals emit waves of light of different lengths. The difference in the length of these waves produces the effect of color in our eye. The chemical that produces the waves comes under the head of pigment.

To prove that there is no such thing as color we will go into a room having only a small window opening to the sky. For our purpose we will consider that the walls of the room are painted black and that there is a white cloud outside the window. Standing in this room the sense of sight receives no color impression. We can truly say there is no such thing as color. Now let us take

a transparent prism of glass having no color itself. We can examine it under the direct light in any position and still there is no color. But let the prism be interposed between the eye and the white light of the window and something wonderful takes place. The ray of white light is transformed into a band of glowing color. This little band contains every color and hue that is known to exist and a few that the eye does not see at all. Scientists call this band of color the "spectrum."

When the prism was held before the white light the eye received the impression of color, but no color was created. What really happened was that the high vibration of the white rays was interfered with and their speed reduced in different degrees as they passed through the prism at different angles. This produced the effect of red, yellow and blue blended together into intermediate shades.

These light waves, or color waves, have a chemical effect as well as a visual effect. And it is simply taking advantage of them that we have the three-color process. Briefly, the process consists of separating these color waves by means of filters into three different photographs and then putting them together again in the three-color print.

One reason the three-color process is not more perfect is because there is a difference between light rays and pigment, or printing-ink. An examination of a picture of the spectrum will show this. No matter how perfect the separation of the color was in the photograph and the cuts, the result from the press would never equal the brilliant glow that came through the prism. And a very slight change in the chemical qualities of the printing-ink would produce a very different result. So much for the limitations of the process. In order to produce a picture of the spectrum the full limit of modern process must be made use of, and as that is the same process as is made use of in producing cuts from pictures a description of it will tell the whole story.

If a photograph of the spectrum had been made in the ordinary way there would have appeared a dark band with a ray of light crossing it a little to the right of the center. But instead of doing that three photographs were made—one through a red screen, one through a green screen and one through a violet screen. The photographic plate was sensitive to all the colors, but of course only

the colors that matched the screen passed through to it so the result was three different photographs, each representing its own color. The interposing of the three cuts in three different colors is in reality putting the colors back where they came from and so reproducing the copy.

There are dozens of different methods of reaching practically the same result, and the best of them will be considered in the future. The accompanying illustrations in color tell more than many pages of descriptive matter, and it would be well for all who are interested to study them carefully.

Half-Tones from Clay Models

Now that there is such a demand for half-tones from clay models the good operator should look into the matter and find out the best way to work them in his shop. The usual method is to have an ordinary photograph made and work from that. This is all right to a certain point; but you can't always get a good photograph made. The average gallery man knows little about mechanical work and it takes time to explain it to him. But the best, and also the quickest way is to make your half-tone negatives direct from the clay. The matter only requires a little study and even if you do have to make three or four or even five trials it is not so expensive and is much quicker than sending the job out to the nearest gallery. And then you have in your two arc-lamps a sharper and more controllable method of illumination than any gallery. By leaving one lamp in its usual place and moving the other away you can get any depth of shadow desired. As a usual thing there is so much reduction from the original that the depth of the model cuts no figure. Should this be apparent it is an easy matter to work with a set of smaller stops, less separation and if necessary put out one of the lamps during part of the exposure in order to get contrast.

Advice from Joseph Pennell

"Is Photography Among the Fine Arts?" Joseph Pennell says it is not, and of course that settles it. He does, however, condemn the modern fuzzy, out-of-focus, impressionistic, gray-toned photographs, that are presumed to be artistic, but give the process worker so much trouble in reproducing. We will all agree with him in the

following: "The old idea was to produce a straightforward photograph, as direct and clear and true as possible; a photograph that was of some use as a record. The new revolutionary photograph is one that has upon the surface a vague resemblance to a poor photograph of a charcoal, a sepia or a wash drawing to an aquatint or a water color. The photographer plays with his print until it is neither the photograph it ought to be nor the drawing he would like it to be. Photographers might to their profit remember that the best work in photo-engraving—the one photographic contrivance that comes in direct connection with art—is done by men who were first artists and then afterward turned to photography." Young men who wish to succeed at process work should ponder on this last thought of Mr. Pennell's, for the future of their business will more and more fall to those possessed of inherent artistic talent or whose hands and judgment have been trained in the art schools.

Light Filters for Color Work

Dr. George Lindsay Johnson, one of the investigators in an exhaustive series of experiments recently made in Vienna to determine the best media for light filters for use in color photography, sent the following note upon the subject to the *Camera Club Journal*:

"For colored process work and for photography in colors, glass slides, coated with collodion or gelatine films, stained with aniline dyes, will enable one to get more perfect colors for such purposes than colored glass. But even better still are glass troughs, consisting of two parallel sides of thin plate glass cemented on to thick pieces at the sides and bottom, and having their faces separated by about 3 mm. to .5 mm. interval. This, filled with a filtered aqueous solution of the selected aniline dye, will give a very perfect color-corrected screen.

"The dyes found most suitable are:

"For the yellow negative, i. e., for the negative which will produce the block or print to receive the yellow color, an aqueous solution of marina blue.

"For the red negative, acid green "Grün-saure," aurantia aqueous solution of each, equal parts.

"For the blue negative, acid fuchsine, "Säurefuchsin," aurantia, equal parts.

"The stains above named may be had in powder or in solution from Grüber and Hollborn, 63, Baierischestrasse, Leipzig; London agent, C. Baker, 244, High Holborn. The glass troughs from Zeiss and Co., Jena, or from Baker, or Townsend and Mercer, Bishopsgate Street, E. C.; Squire, chemist, Oxford Street and Martindale, New Cavendish Street, also keep excellent stains, and are very well informed, as they both make stains a specialty."

The plates recommended are all of foreign make but they are of such a type as correspond to the following American makes: Blue, Cramer's slow isochromatic; red, Seed 26; yellow, Seed's, Cramer's or Carbutt's transparency or process plates.

Testing Hydrometers

It is a most important matter to keep the hydrometer scale at the right point. Most of them are rather frail in this respect and have to be watched. A good plan is to make a test before using the instrument. This is done by washing thoroughly and filling with distilled water. Be sure to use distilled water. Nearly all tap water contains lime, as well as other organic and inorganic substances. Always handle the instrument gently and put it into the water carefully. If the stem stands at zero in the water it is O. K. If it sinks below, and tests stronger, it is "off"; to remedy, tap the small end of the hydrometer on a board and jar the paper in the stem down. Keep testing until it is at the right point.

Film for Process Negatives

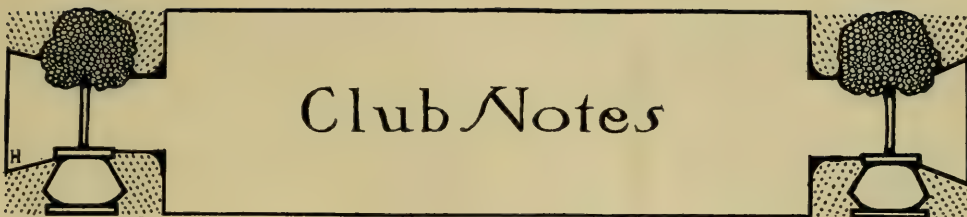
From all reports the dry plate is slowly but surely winning its way into photo-engraving. Much has been written on this subject in the European journals, and many able workers have really abandoned the wet plate in all their work. The latest development along these lines is the use of films for the process negative. A writer in the *Photo Chemie*, of Paris, states that he has found the film of the greatest advantage. He says that the negative quality is just as good as glass, that the film comes into better contact with the plate in printing, that there is no danger of breakage and that by using a prism for reversing he can print a dozen negatives at once without the trouble of stripping. All of which is very interesting but it will be a long time before we are all using films in this country.

Making Stops of Cardboard

Within the last month my attention was called to a "trouble" that I have no doubt exists a great deal more than many imagine. The operator had been having a run of work from photographs with a great deal of light, flat skies. His complaint was that the skies "would not come smooth and even." Everything about his shop appeared all right. Negatives bright, clean and sharp and the print on the copper "looked" all right. But when it was etched it was all wrong. Apparently the difficulty was in the etching, but eventually it turned out to be in the negative. One of his stops was so carelessly cut that its deficiency from the rectangle was apparent to the eye. Comparison with the other stops showed a perfect tangle of lines. When this was known the defect was apparent in all the negatives. At certain intervals the crossing of the lines was irregular and the corners quite rounded. Of course the printing and etching only intensified this defect. On jobs with broken tints such a defect would not be noticed but it goes to show just how important a perfect stop is. Make your stops with a compass and T square. A negative can be made with any kind of a stop provided it is accurate.

Engraving the Half-Tone Block

In turning over the latest magazines, the amount of hand work that is being done on the half-tone block is most noticeable. At least two thirds of the cuts are being gone over by the wood-engraver, for that is the general effect of the result of this work. Out here on the coast we do very little of this work, but there is a demand for it and it is "coming." The question that is troubling a good many photo-engravers is: How do you do it? To begin with a process worker can't do it unless he happens to have served an apprenticeship as a wood-engraver. But for those who wish to take it up there is a right way to go about it. A cut that is to be engraved is generally made on zinc as this metal is soft and cuts with very little "burr." Regular wood-engravers' tools are used. Some engravers ink the cut before working on it. Of course the ink must be dried before beginning work. This done, the next thing to remember is not to cut too deep. A very fine line shows very white on a half-tone cut.



Club Notes

News Items From the Various Camera Clubs

By C. A. GOE

To All Camera Clubs

The Editor of this department will deem it a favor if you will send in monthly reports of your work or items of interest concerning club matters. All matter should be forwarded to reach here not later than the first of the month. CAMERA CRAFT has a large Eastern circulation and we will be well pleased to publish such notes of interest as your President, Secretary, or any member of your club may be pleased to send.

California Camera Club

I wish it were possible to publish some of the answers that were received in regard to the removal of the Club to the Jefferson Square Club Building, but I suppose that my so doing would be a betrayal of confidence, particularly as the replies were made on a postal card and no one in the club rooms could read them. The matter was of no small import and the manner in which it was treated by some of the members indicated an absolute lack of interest in the welfare of the Club. They refused to visit the proposed new quarters and inform themselves as to the advantages or disadvantages. One man was horrified at the prospect of a cafe in the same building (there are ninety-nine "cafes" within a block of our present quarters); another objected to the bowling alley (he's the little fellow who could not throw a ball if he tried); another saw disaster with a garage in the lower floor (don't blame him, it costs a good deal for an auto); one liked it because he lived in the neighborhood but was paired by the fellow living on another street a mile away. The first favored the move but the latter found the quarters undesirable. One liked the proposed quarters because *another* did not and would not consider the propo-

sition because the fourth thought it advisable. Throughout the whole discussion the good or bad result to the Club seemed to escape many of the members, and the proposition was treated either from the selfish standpoint or in a jocular manner. There were a number, however, who gave the whole proposition good, serious attention, with the result that the move was not made and much unpleasantness has been avoided. The California Camera Club is still at the same old place, 819 Market Street, where friends from the North, East, South or West will always find a welcome.

Brooklyn Camera Club Exhibition

The Brooklyn Camera Club announces the following rules to govern the entries of its coming Exhibition and Competition to be held at its rooms on February 16th, 17th, and 18th, 1905. The competition is open to amateur and professional photographers. Pictures must be framed or passe partouted, and forwarded express charges prepaid to the club rooms, 776 Manhattan Avenue, Brooklyn, New York, not later than February 11th, 1905. The name of the exhibitor and address, also title of picture must be written on the back of each frame, and a list of same sent to the chairman of the print committee. Judges will be selected and announced later. The following are the awards, President's award for the best picture in the exhibition, a silver medal, a bronze medal and honorable mention in each of the following classes: Genre, portrait, landscape, marine and miscellaneous. The jury having full power to withhold any awards in the different classes where there is not sufficient merit in their judgment to warrant same; also are privileged in discriminating on the pictures sent in, on any such pictures that do not meet

their approval for hanging in this exhibition, as the jury is requested to select up to two hundred pictures. Further information will be cheerfully given by addressing C. M. Shipman, Chairman of Print Committee.

Illustrated Lecture

The Club has not had as interesting and instructive a lecture for many a month as that given in December by Prof. T. J. Alley. The word "lecture" is not the proper one to use; the more appropriate one is "itinerary" for Prof. Alley, as a guide, takes one along with him in his journeys. His many years of travel and residence in the Holy Land have made him so familiar with the different localities that when he shows the pictures (all of which were taken by himself) and tells you of them you are assured that he is speaking with authority and from personal knowledge. So often one has to sit and try to be interested in a lecture about Europe, Asia, Africa or Australia by a man who knows absolutely

nothing about the particular locality except what he may learn from the pictures and description as given in the prepared lecture; but with Prof. Alley it is different. When he starts on his trip he carries you with him allowing you to stop long enough at each place to enjoy whatever it may have of interest to offer, and when the trip is ended you reluctantly leave, for you find it hard to realize that you have only taken this journey through the camera and Prof. Alley's descriptions.

The First New York Salon

The apportioning of dates has been so arranged that the complete exhibition as shown in New York will be available for the Pacific Coast from April first until May second. The Toronto Club had already secured this date but on learning of the situation which demanded a full month on the coast in order that both Portland and San Francisco might have the exhibition, kindly withdrew their claim.


Photographers' Association of California

The regular monthly meeting of the Photographers' Association of California was held on Tuesday evening, January 3d, in Eagles Hall, 729 Market Street.


Rather, the members assembled at this hall and then proceeded in a body to the elegant dining-room of the Red Lion Café where refreshments were served during the evening. Great credit is due the committee for the added enjoyment thus provided, all pronouncing this part of the program a feature that conduced greatly to the sociability that was displayed. This January meeting inaugurated the third year of the Association, and every member justly feels proud of the splendid showing that has been made since the organization in 1903. The successful manner in which they have demonstrated their ability for doing things—big things—has brought them to the front with a sweep, and today they are known and recognized as being one of the foremost State Associations. Every effort that enthusiasm can suggest and energy put forth will be made to keep it in the front ranks during 1905.

During the evening many of the members related experiences of an entertaining or instructive nature. Mr. Webster urged upon the Association the importance of making a good showing at the next convention, to be held jointly with the Association of the Northwest at Portland. The advisability of making preparations for the production of exhibition pictures well in advance of the date selected, was pointed out. Mr. Boyé also gave his attention to the same subject in a few well-chosen words.

The new board of officers, elected at the convention, were installed at this meeting with due ceremony, and the event was celebrated in royal style. T. P. Andrews, J. F. Bertrand, L. D. Hicks, W. H. Lange and Will Lussier formed the committee having the matter in charge. Every one knows what to expect when these royal entertainers are in command. In addition to a table laden with good things to eat and drink, there was much enjoyable in the way of entertainment. Cares and wisdom were forgotten for the night, and a happy evening passed all too quickly.



Notes and Comment



Particular Points of Superiority of the Prosch Blitzlite Flash Lamps

The Prosch Blitzlite is the only successful lamp on the market that is absolutely certain to give an exposure every time, and the only one that can be operated simultaneously in twos, threes, fours, and up to any number. Equipped with these lamps the photographer can do any class of work, and much more and better work than he can do by daylight.

The closed chamber in which the powder is ignited is responsible for the many points of superiority in this lamp. It causes the flame to be forced upward and sidewise in a thin sheet of great area, thus producing at least five times as large an area of flame as can be obtained from the same amount of powder in any other lamp.

As area, not depth of flame, is the measure of illumination, this lamp, therefore, saves at least four fifths of the powder used in the ordinary lamp. The closed chamber insures complete combustion of the powder, as the powder must be all aflame before the spring doors begin to open, and for this reason the speed of the flame is greatly increased.

Immediately after the flash, the spring doors close and retain all of the ashes and sediment which usually spread over the room after a flash with an ordinary lamp. The thin sheet of flame enables it to be directed at any angle, even horizontally, near a ceiling without danger of damaging the latter, and makes it possible to use this lamp within a foot or two of the subject with perfect safety.

The lamp proper, with battery, etc., makes a package small enough to carry in one's side-pocket, and it is exceedingly easy to operate and keep clean. The closed chamber for the powder enables the operator to use this lamp out of doors in windy or stormy weather. Only one small carrying-case is necessary to carry one or even two complete outfits.

There are three styles of lamps: Blitzlite I is a studio portrait lamp, ten inches long and one-half inch in depth, and is intended for single portraits or small groups. It is also the ideal amateur lamp for home portraiture.

Blitzlite II, which is ten inches long and one inch in depth, is especially suitable for producing an extra large flame from a small amount of powder, and is the ideal lamp for the studio for portraits, groups, etc., when used with folding standard and diffusing screen. It is the best lamp for the newspaper photographer and reporter and traveler, as it is easily carried about.

Blitzlite III is a general purpose lamp, suitable for everything and large enough for the largest group, as well as small enough for studio work, etc. It is ten inches long, two inches in depth, with front one inch and back two inches in height. A special variation is made in this lamp, where desired, giving it a length of fifteen inches and depth of one inch.

Mid-winter Term of the C. C. of P.

The California College of Photography opened their mid-winter term on the 3d of this month with the largest attendance in the history of the college. Another addition to the faculty has been made by the directors. E. J. McCullagh, who has been connected with the leading studios of San Francisco and Oakland for the last thirteen years, now has charge of the Department taking up the study of Platinum and Carbon papers.

President Dudley is preparing a special course for the professional photographer. This course will embrace such subjects as will be of most benefit to the photographer located in the smaller cities and towns. It will acquaint him with all of the latest methods so that when the fall and holiday trade starts up he can offer his customers a line of work that will not only please them, but will increase his trade at least seventy-five per cent. And, further, he will

have the added pleasure of turning out a more satisfactory piece of work with less trouble, less cost, hence an added profit. The expense of taking either a one, two or three-months' course will be so slight that the first few orders will pay for it.

What professional man is there that would not like to brush up on some of the new things that are so captivating the customers of the city photographers? Never has such an opportunity been presented, and the Editor would suggest, if you are at all interested in the success of your own business, that you write the college management, whose address will be found in their advertisement on another page, for full particulars regarding these special courses.

Two New Series of Cooke Anastigmats

We have just received an illustrated circular introducing two rapid series of Cooke anastigmats, having the large apertures of F/5.6 and F/4.5. They are designed for high-speed photography, for the finest portraiture, and for those trying subjects on dull days, familiar to every advanced amateur and professional photographer.

It is scarcely two years since the opening of their New York office, yet in that time Cooke lenses have gained a unique position. It is no exaggeration to say that wherever the most searching tests have been made, Cooke anastigmats have been chosen; by the best amateurs and professionals, by leading astronomers, by process-workers, and by just those scientific men capable of deciding between "the best and the very best."

The advantages in construction are fully developed in the new Series II and IV lenses, and they invite fair comparison between these ultra-rapid Cooke lenses, and all others now on the market with the same focal length and aperture.

An Innovation

Those who have made a study of the prize lists of the various photographic competitions have been impressed with the fact that the greater proportion of the good prizes are regularly carried off by the same people. This has of course proved a discouragement to those of less experience. There are many amateurs who are capable of making really excellent work, yet they fall just a trifle short of that artistic excellence which has been so long cultivated by some of their

co-workers. We believe that these younger enthusiasts in the photographic field are nevertheless entitled to an opportunity to carry off some of the good things in the way of prizes and we have therefore divided this competition into two general classes, the "Open" and the "Novice," these in turn being properly subdivided.

The "OPEN" class may be entered by any photographer (not in our employ) who complies with the conditions specified.

The "NOVICE" class is open only to amateurs who have never won a prize in a photographic contest.

While the Novice classes are open only to those who have never been prize-winners, the ambitious beginner may if he is attracted by the valuable prizes and high honors offered in the Open class, enter against the somewhat keener competition he will be sure to meet there.

We trust that both the beginners in photography and those who have often had their names upon the honor roll will be pleased with this eminently just and fair arrangement of the prize list.

EASTMAN KODAK Co.,
Rochester, N. Y.

The above is an extract from the announcement of the 1905 Kodak Competition which closes November 1st, next. \$2,000 in prizes are offered in three "Open" and three "Novice" classes. In addition there are three other special prizes for prints on Velox paper. These prize-winning prints will be selected from the best Velox prints entered in any of the six classes excepting Class C which is for enlargements. It is not often that the novice has an opportunity of competing in his own class for some thirty odd prizes, six of them (not including the three Velox prizes of \$100, \$60 and \$40 respectively), cash prizes, ranging from \$25 to \$100. In the open class the prizes are still more tempting. The camera user who fails to secure a copy of the conditions and the list of prizes from their dealer, or the Eastman Company is missing a good chance to pick up dollars or a good camera, just the same as finding it in the street. Even the most modest tyro should not neglect to take advantage of this competition. As has been demonstrated by the awards made in previous competitions, the amateur stands the same chance as the past master in photography.

Spirit Levels

You all know what a spirit level is, but very few of you know what a good one is like. You know the kind in which the bubble does not start to move until the camera is tilted to an angle of forty-five degrees and then it darts across the field of vision like a sky-rocket with a few hours lost time to be made up. I bought one of the Taylor, Taylor and Hobson kind about five years ago and have been very proud of it since. I had to send over to England after it, but I was tempted to do so by a description of the machine devised and patented for their production. Until that time an equally reliable and smooth-acting level cost quite a neat sum. Seven different styles are made and the prices are tempting, that is, when one realizes that they are of the same fine workmanship that characterizes the Cooke anastigmats. Write Taylor, Taylor and Hobson, St. James Building, New York City, for their "Level Booklet F."

The Popularity of Machine Development

The advantage of machine development has never been more thoroughly demonstrated than by the Kodak Commercial Developing Machine. One of these instruments, which was specially constructed by the Eastman Kodak Co. for Messrs. Hirsch and Kaiser, of San Francisco, has just been installed, and is in daily use. The machine is operated by a motor, and has a capacity of fifty rolls per hour. The results produced are testimonials as to the superiority of machine development.

The high reputation which this firm holds for the good quality of the work turned out by their finishing department has so increased the demands made upon their facilities that the introduction of this specially constructed machine will come as a relief that could have been looked for from no other quarter. The jealousy with which this reputation so painstakingly earned, is guarded by these progressive people, is an assurance that only a clear demonstration of the superiority of the method would induce them to change from their former way of working. The machine has now been in operation for nearly two months and the added satisfaction of their patrons and the increased volume of their business cause them to regret only that the machine was not at their disposal long ago.

An Increased Demand

Cramer's Isochromatic plates are coming to the front with rapid strides. A keener appreciation of the desirability of more correct color values than is given by the ordinary plate is one of the signs of the times. The added charm that is given to any picture produced by photographic methods when a good color sensitive plate has been used, is easily demonstrated by a trial. This is particularly noticeable in the less fully lighted parts of the subject. Compare the effect secured on the two plates and one will at once recognize the difference between a picture in which the shadows are of varying intensity and another in which all shadows beyond a certain depth are of a uniform tone or value. It is this lack of life and values in the shadows as represented by the ordinary plate which leads some writers to proclaim that full exposure will give almost orthochromatic effects on the regular plates. Such is not the case. True, effects are improved by a better rendition of the gradations in the shadows but the lack of color value remains the same.

The high technical excellence of the negatives made on Cramer Isochromatic plates are a revelation to those who have heretofore believed them suited only to special classes of work. The same high quality which has made the Cramer plate so justly popular, is maintained. The rendering of the emulsion color sensitive in no way changes its quality as to latitude in exposure or brilliancy of results. Its behavior in the developer is the same. Write the Cramer people for a booklet and give the plates a trial. Do not place yourself in a position to regret that certain negatives were not made on a color sensitive plate as you will be certain to do as right interpretation of color values becomes more and more a necessity in your work.

"Points of Practical Value"

The above is the title of a handsome booklet of some fifty pages that has just been gotten out by John Royle & Sons of Paterson, New Jersey. Every user of a router should have a copy of this book; in fact, any person interested in the use or application of fine machinery of any kind could find much to interest him within its pages. It is not only finely illustrated but the printing and binding is of the highest artistic value.

CAMERA CRAFT

A PHOTOGRAPHIC MONTHLY

114 Geary St., San Francisco

Entered at the Post Office in San Francisco as second-class mail matter
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Wanted—To buy or lease, small studio near San Francisco. Address X. Y. Z., care CAMERA CRAFT.

For Sale—First-class studio in San Diego at a bargain. If you have \$500, write Gordon & Goodwin, 1202 Fourth St., San Diego, Cal.

Scenic Backgrounds for 1905—Packard Brothers, Boston, Mass. The oldest established house in America. Mammoth illustrated Catalogue free.

For Sale—5x7 Premo box with Zeiss convertible anastigmat lens, Series 7A, cost \$128. Perfect condition. Will sell for \$60 cash. Address L. J. P., care CAMERA CRAFT.

For Sale—The oldest and best equipped studio in Denver, Colorado. Established 25 years, good location, low rent, steam heat, elevator, everything modern. Unequaled climate, particularly for weak lungs. Will be sold at a bargain. A. E. Rinehart, 1630 Arapahoe St., Denver, Colorado.

Two hundred and fifty-six unmounted views of the Philippines; size 5x7; no two alike; packed in case ready to mail, \$3. J. D. Givins, photographer, 2026 Green St., San Francisco, Cal.

33 1-3 per cent discount on 1904 cameras. Send stamp for greatest bargain list yet published; 20 to 60 per cent saved on supplies. Broadway Camera Exchange, 621 Broadway, New York.

For Sale—The only gallery in county-seat, 3,000 inhabitants, good business, good prices; building lot and all, \$1,500. Speak quick if you want a genuine bargain; other business more important to me. Address Box 283, Merced, California.

Wanted—Good retoucher wants to go to warmer climate, would like piece work to do. If you have enough to keep one busy part of the time, write, F. Berryman, Superior, Wisconsin.

CAMERA CRAFT



San Francisco California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CALIFORNIA



AT THE FOOT-BRIDGE, MEXICO
by F. E. MONTEVERDE

CAMERA CRAFT

A PHOTOGRAPHIC
MONTHLY

VOL. X.

SAN FRANCISCO, CALIFORNIA, MARCH, 1905.

No. 3

The Artistic Composition of Trees

By HARRY QUILTER

Illustrated by the author



When one is afield with the camera, and in the immediate vicinity of woods or tree plantations, one may feel that the arrangement of trees, or perhaps more correctly, the composition of tree-trunks which shall afford or embody a psychological and esthetic treatment, is a difficult matter. Difficult it may be, because as a rule, trees do not grow as our esthetic tastes would dictate, but rather as circumstances or environment will permit. This was brought forcibly to my mind when out upon a photographic holiday. I was in a delightfully wooded country, the trees were at their best, and beautiful weather prevailed. It was evident that pictures were to be made, but, as I have remarked, the chief difficulty was the decorative or picturesque arrangement of the trees. Not, however, the

trees themselves in masses, but the compositions formed by the tree-trunks.

And so I essayed to produce pictures which should prove pleasing and imaginative by reason of their decorative character, and yet be in many respects true to their natural growth. There were, however, some principles which had to be borne in mind. One was the rule or law of repetition; the more simple the principal object, the more necessary that it should be repeated. A simple form can be repeated without being at all tiresome. At the same time variation must be introduced, and this was found in the distances between the trees, and was thus



NO. 1—EXAMPLE OF TREE COMPOSITION



NO. 2—EXAMPLE OF TREE COMPOSITION

subordinated to the greater principle of repetition. A composition of this kind possesses the two principal elements of pictorial art, repetition and variation. It is true to nature and life, and yet decorative. There happened to be a nice little group of birch-trees from which I fancied several pictures might be made on these lines. The group in itself afforded a pleasing picture (No. 1), that is, by including upon the focusing screen as much of the group as would give a natural growth effect, and at the same time would be decorative or pictorial in effect. A closer inspection of this group revealed the fact that other pictures could be made from its component parts. In No. 2 we have a most interesting disposition of the trees. If examined it will be noticed that the distance from the edge of the picture to the tree on the right hand is about one half the division between that and the next tree. The following space is about three times as



NO 3—EXAMPLE OF TREE COMPOSITION

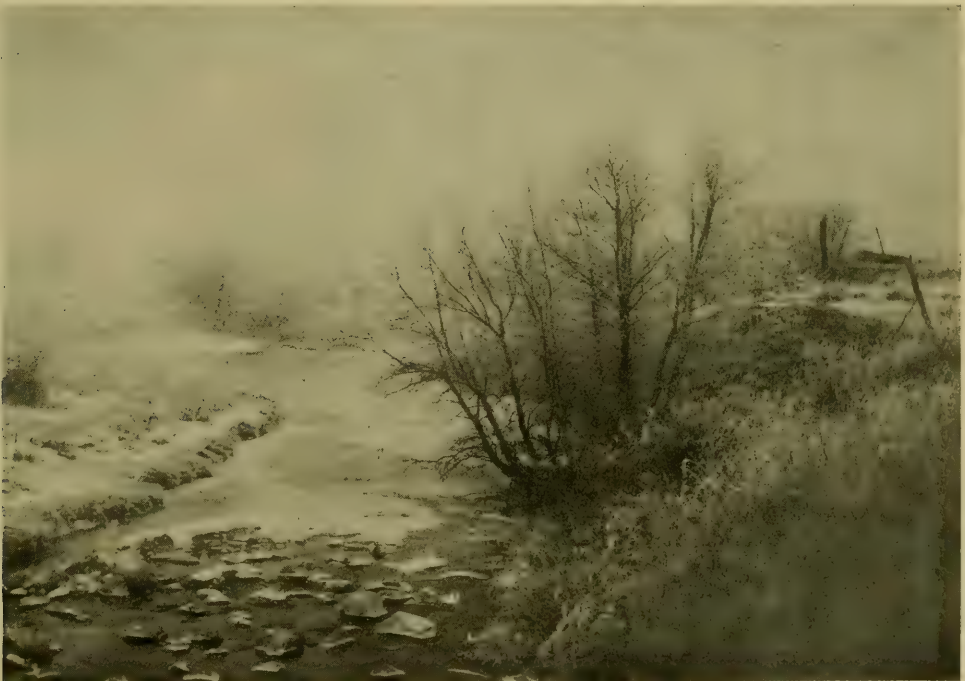
much, while they also collectively balance the small group on the left. This is an excellent composition of the recurring upright lines formed by the trees. We have repetition of the tree-trunks with an agreeable variation of the distances between them. Another group was noticed which appeared to form one of some interest (No. 3). If this picture be divided into seven parts, it will be found that one seventh of these parts is occupied by the distance between the tree on the right hand and the edge of the print, while the remaining six sevenths is occupied by the space and the group of trees upon the left hand. A pleasing effect is gained by this distribution of spacing. My attention was then attracted to another, though smaller group, which seemed to show in some measure an interesting disposition by the radiation of lines, that is, lines springing from a common center (No. 4). It should be remembered that the compositions noted and illustrated



NO 4—EXAMPLE OF TREE COMPOSITION

are not to be taken too literally as rules, but only as practical ideas upon the composition of trees in photographic picture-making.

There is another phase of this subject which should not be neglected. The tone values of the trees and the plants should also be taken into account. For these pictures an orthochromatic, or color-sensitive plate, and a ray-filter, or yellow screen are really necessary. A full exposure upon the plate should also be given. It is as well when out photographing among trees that one should have lenses of different focal lengths, so that the more artistic compositions can be fully utilized. When the exposed plates are developed, they should be allowed to develop slowly in a weak solution, and the negatives kept somewhat thin. This procedure will preserve the atmosphere, as it is termed, or the out-of-door feeling. Nothing is so destructive of this atmospheric quality which contributes so much to the charm of landscape work as a shortened scale of gradation which is sure to result where too strong a developer is used.



WHITE DEATH

BY CORA T. AND WILL H. WALKER



SHY
by J. C. S. AUNE
Portland, Oregon

The Fallacy of the Exposure Meter

By PRESTON E. ANDERSON

We are entirely too ready to accept as trustworthy any well-advertised article that promises us relief from evils which we recognize as detracting from our pleasure; in fact the credence given the claims of those interested in the marketing of any such article is, as a rule, exactly in proportion to the amount of discomfiture resulting from the evil which such article proposes to correct. Not only this, but the inclination to investigate the validity of the claims made, decreases exactly in the same ratio. The claims made for the various forms of exposure meters are naturally such as would be expected. They follow, just as does any other well-behaved stream, the path of least resistance. Like the oil well with its stock offered at a valuation far in excess of the amount it should claim, its investigation is discouraged and attention attracted in another direction, although the promoters bend all their energies to an exploitation of the enormous dividends being paid at the moment.

An exposure meter certainly does measure the actinism of the light at the time its readings are taken. If a certain subject require a certain exposure with a certain reading the meter will give us the exact relative exposure for the same subject with a different actinism of the light. The latter of these two rests its value solely on the first. Let us see how much use we can make of the first.

A building is to be photographed from two points of view. From one side we have two brightly illuminated walls, no trees nearer than the next block are in evidence, in fact the plate is completely filled with the image of a white surface in brilliant sunlight. We move to the other aspect of the building and find not only is that side entirely in shadow but that the shadows are intensified by trees, in themselves dark, cutting off even the light from the sky which would give some illumination to the natural shadows on that side. It is evident that the reading of the meter would be the same in both cases, even if held "in the shadow of the body" as directed. Even if we go a step farther and expose the meter in the shadow in which detail is required in both subjects, can we believe that a large mass of shadow almost filling the plate will require the same exposure as another capable of giving an equally slow reading on the sensitive surface of the meter, but forming only a small portion of the



THE SMOKER

BY ART ALAIN



MISS M.

BY G. C. ELMBERGER

otherwise brilliantly lighted subject? Let us not be unfair; the instructions advise us that we must set the scale according to the subject: so many times for dark foreground, so many for this and so much for that. But are you using the meter or your own judgment when you determine these factors? The meter simply measures the actinism of the light and a sheet of Solio paper will do exactly the same thing. We do not need a meter to tell us that the next largest stop requires half the exposure or that "open landscape" requires less than one with dark objects in the foreground. What we need is a little common sense. Even this can be dispensed with, and its place filled most satisfactorily with a little experience, much less, no doubt, than is required to manipulate the complicated instructions so liberally furnished in connection with the meter.

Suppose we had some form of a meter that would determine the amount of water in a stream. With this we

are supplied with a lot of tables and other instructions advising that we estimate the rapidity of flow, set the pointer at the reading first secured and the ring at the estimated flow, and the result on the dial will be the width of the stream. There might be no denying that the amount of water was correctly registered, even when the requirement of holding the "meter" in the "shadow" of the body was not insisted upon. One might become ever so expert in the determination of the velocity of the flow, users might be brought forward by the score who were willing to declare they secured the exact length of bridge required to span innumerable streams by use of the instrument, but the reasoning person would ask for more exact methods, or failing that, would at once go about the work of cultivating a capacity for judging the distance by the eye alone.

It is not the light that falls upon the meter that forms the image upon the plate. It is not the light in the "shadow of the body." Neither is it a light so synchronous that the measurement of one will give the value of the other. What is wanted is the light that is reflected from the subject upon the ground glass. It has been put forth that a meter placed at a point within the lens flange where it would receive the same light as does the front combination of the lens, would overcome this difficulty. A moment's thought would disprove this theory. We can photograph, let us say, a certain view with the camera standing in bright sunlight. Moving the camera a few feet to one side and while practically the same view is on our plate and the same exposure required, the lens is now in the deep shade of a tree. Can we believe that under both conditions the darkening of

the sensitive surface of the meter, even if placed at the proposed point within the flange of the lens, would proceed with the same rapidity? I think not.

The whole matter resolves itself into a simple proposition. The meter does not give you any added information concerning stop, plate or character of subject, and such as it does give concerning the light is of problematical value. A very little practice will enable one to estimate the intensity of the light, if not as accurately as to its actinism, at least in such a way that there will be less uncertainty of its value in connection with the other factors governing the exposure. Not only this, but as one learns to exercise his faculty of observation the process of deducting the correct exposure will grow more simple until it becomes akin to intuition if I may use the word. Placing ourselves at the mercy of a mechanical contrivance, unless it be one that is correct, but delays the time when we shall be free to dispense with its aid.

Learn the relationship between the different stops. Find the difference in speed between this plate and the other. Get some definite idea as to the relative exposure required for subjects of various characters, and the question concerning the actual value of the light will be found a small matter. At least, it will be found to require less study for its mastery than will just those points which the meter leaves for one to determine for himself. If the value of the light is to be tested the method advised by Mr. Steadman for indoor portraiture is all that can be desired. In the class of work regarding which he so ably advises, the determination of the value of the light is, owing to the adaptability of the eyes, much more difficult than in ordinary out-door work. In his method, the value of light measurement is apparent and the fullest advantage of such measurement realized. The little book which the Eastman Company put out describing his procedure, should be in the hands of every amateur in the land.

Simplicity

Simplicity is a power that we find the artist of the brush often using to enhance the pictorial value of his work. Imagine the "Angelus" painted with the microscopic detail so dear to some artists, even of the brush. There are no doubt many productions containing elaborate rendition of detail that have won renown for the painter whose name they bear, but the fact remains microscopic portrayal of detail of form and texture does not in itself constitute a needed element in the production of a picture of artistic or intrinsic value. The charm of the "Angelus" depends in no small measure upon the charming simplicity with which the artist has invested the canvas in his masterful display of genius. Were a less consummate master of the brush to have attempted the portrayal of such a subject, how different would have been the result. Had such a subject been given a photographer, how confidently could we have depended upon the introduction of houses, trees and other objects that the portrayal might have been made more interesting; the success achieved by simplicity would have been denied.

A Few Photographic Suggestions

By NORAH H. MILLSPAUGH

Much of the delight which comes to the enthusiastic beginner in photography is found in his ability to share with others the results of his pictorial achievements. Many are the unique and wordless messages he may send to his friends, pictures recalling old home scenes, new portraits of the baby, views from far-distant lands, are all possibilities, products oftentimes of patient endeavor. More frequently they are snap-shots taken at random and poorly executed, but in any case the prints are welcomed by those receiving them. This appreciation on the part of friends proves no small incentive to increased effort by the amateur who already shows a somewhat fearless readiness to enter untried fields.

Very pretty and original reminders, suitable for various occasions, may be prepared by the average amateur with the exercise of a little patience and thought. Easter greetings, Christmas cards and the like are but items in a long list that a little thought will suggest to any one. Score, menu and place-cards are easily given an originality and distinctiveness by bringing the camera into play. Favors, even quite elaborate gifts, may be prepared. Invitations and note paper lend themselves to photographic decoration that can be endowed with an individuality that would be quite expensive if secured through other means.

But in spite of the fascinating nature of the art of picture-making, and notwithstanding the valued estimation of admiring friends, the real "camera fiend," after pursuing his strenuous way, anxious to see what can be done with his new possession, seems to come, sooner or later, to a climax of his ambition. He then tires of landscapes, portraits and interiors, grows truly weary of combating those forces which conspire against the production of satisfactory photographs and he arrives at the period of reaction.





All too frequently the surfeited amateur gradually leaves his zeal behind and the once precious kodak gathers dust in a forgotten corner. To save the situation at this time and to spur a lagging interest, nothing serves better than turning the attention to material already at hand with particular regard to accumulated negatives. The collection of every full-blown amateur contains plates of unsuspected worth and by a careful selection prints may be secured and applied in unusual ways, a pleasant pastime is assured and souvenirs upon which there is the stamp of originality may be made.

With these hints I will describe some of the results that I have secured. To show them all would require too much space in the way of illustrations. The few that are shown will suffice to indicate the possibilities that lie in this direction, and no doubt my readers can devise, unaided, more and better ways of employing their knowledge of photography in this line than I could advise in a more extended article.

The accompanying illustrations are intended as suggestions for new settings of old prints or as hints to the making of negatives with the view to their special application, and are particularly fitting if used as Christmas gifts. On the book-list appears a picture chosen because of the conspicuous presence of books. This cover is inscribed: "Books I Have Read," and on the fly-leaf is written the following notice: "In these days of book deluge keep out of the salt swamps of literature and live on a little rocky island of your own with a spring and a lake in it, pure and good." As the title imports this list is to be kept as a memorandum and review of books read.

The violent sachet is a long narrow envelope, which can be obtained at the druggist's, filled with a packet of violet powder and tied with blue ribbons. The face of the envelope was coated with blue-print solution, the violets were printed on it and tinted with green and violet water-color paint. Written in blue ink appear the words:

Those I love, I have brought to you,
Violets, in their bonnets blue.

These sachets may also be made of any fine-grained paper, such as wedding stationery sensitized and blue-printed, folded into envelopes and completed as described above. The blue of the print lends itself beautifully to the violet and green water-color tinting of the flowers and leaves.

The fruit pieces and chrysanthemums are dinner-cards, the chrysanthemums to be colored and used with table decorations of the same flower. The wreath of California holly may be painted and placed on dinner-cards at Christmas-time, or sent as a greeting on that festive day. The rose-heart was intended as a place-card at a June wedding breakfast. The prints were tinted a delicate pink and green arranged upon pearl-gray mounts folded tent-wise to form an easel. These roses would appear well on score-cards for a hearts' party or as souvenirs at a Valentine luncheon. If the dinner or score-cards are prepared and sent away in sets of a dozen or more they will be gratefully received by those who are ever seeking novel features for the entertainment of guests.

Some Art Rules

Mr. Cox, lecturing before the Aston Photographic Society a few years ago, laid down the following rules: Strictly vertical arrangements are to be avoided. Never place articles of importance immediately beneath each other. The same may be said of lights. Avoid placing secondary lights immediately under the principal, even though the secondary light may be the reflection, but: Place the brightest part of it, if you can, a little to the right or left of it. Treat the darks in the same way. Avoid having two lights of equal form and brilliancy. The same may be said of darks. The height and size of objects of importance in a picture, as trees, hills, buildings, are often better given by placing cattle, figures, boats, and the like, at the foot of such objects, but: In so doing never place such figures in or immediately underneath the center of such object. Never, or rarely, place the horizon midway in your picture. Use figures to lead your eye from object to object, and to relieve one mass from another. When a shadow is thrown across a building, thus dividing the lights of a picture, a smaller object of lighter tint than the shadow will serve to connect the light without destroying the breadth, if judiciously introduced. Paths of light may be used to connect masses of light and shade, but these paths of light must never surpass, either in brightness of tint or tone, depth of shade, or purity of color, the light, shade, or tone of the larger masses.

These fourteen rules as laid down by an artist of undeniable standing are worthy of the most careful consideration by those wishing to make their work conform to the tenets of art. With these few rules in mind, the study of a few photographic pictures, either our own or those of others, can be made most interesting. We will find these rules often violated and in recognizing such departures from the practice of our friends, the artists, we can often discover why our efforts meet with such scant approval at their hands. It must be remembered that these rules in no way form a guide as to the production of a picture. They are simply in the nature of a setting forth of a few simple errors and a few expedients for correcting others. At the same time, we should find in them much that is of practical assistance and much that we can easily apply. They are well worth the best consideration and attention of us all.



A DAUGHTER OF MEXICO
by F. E. MONTEVERDE

Seaside Photography

By CHARLES S. TAYLOR

The charm of the sea is one of complete fascination; its ever-changing forms, both in sun and rain, hold our interest unabated. Then, too, the life peculiar to the coast, unhampered with conventionalities, offers splendid opportunities for the camerist. There is no need of a special apparatus for seaside work, a view camera and a box camera of the fixed focus type will answer every use. For serious pictorial work we have the stand camera, and the fixed focus box will enable one to secure bits of seashore life impossible with the bulkier camera. Many charming incidents of the locality; the launch of the life-boat, local characters and the young tots at play, all form attractive subjects. In fact, lack of material is never to be feared, for subjects abound at every turn, many already titled.

Extra precaution in keeping the apparatus in condition should be observed. Films are sometimes troublesome unless stored in a dry, cool place. Plates are easier cared for, but it is well to err upon the side of too much caution, for it is rarely wasted. The cameras, plates, and other paraphernalia should be stored as far as possible from the ground and incidental dampness. The question of exposure at the shore is by far the most important item and perhaps more plates are spoiled through over-exposure than by any other means. Here we must cope with conditions peculiarly local in character, the great amount of reflected light making it practically impossible to under-expose with an ordinary lens speed. The following tables of exposures taken from my note-book, have been of great service to me and I give them for what they are worth. I will add that they have been



AFTER THE STORM

R. S. REQUA

in use from Key West to the state of Washington, and they may be used with confidence. Local conditions of the atmosphere will of course affect them, but using them as a base, calculations may be quickly made to suit any exceptional weather likely to be found.

MORNING				AFTERNOON			
January	8:00	9:30	later	January	4:00	2:30	earlier
February	8:00	8:30	"	February	5:00	4:00	"
March	6:30	7:00	"	March	5:20	4:15	"
April	5:50	6:30	"	April	6:00	5:10	"
May	5:20	6:00	"	May	6:20	5:15	"
June	5:00	5:45	7:15	June	6:30	5:15	3:20
July	5:20	6:00	7:25	July	6:30	6:00	3:25
August	5:50	6:20	9:00	August	6:15	5:40	3:10
September	6:10	6:40	9:25	September	5:25	5:00	2:20
October	6:55	7:30	8:50	October	4:55	4:20	2:30
November	7:45	8:25	10:00	November	4:05	3:25	1:30
December	8:10	9:00		December	3:50	3:00	

EXPOSURES				EXPOSURES			
F— 8	$\frac{1}{10}$		$\frac{1}{15}$	F— 8	$\frac{1}{10}$		$\frac{1}{15}$
8+		$\frac{1}{10}$		8+		$\frac{1}{25}$	$\frac{1}{30}$
11	$\frac{1}{5}$		$\frac{1}{25}$	11	$\frac{1}{5}$		$\frac{1}{30}$
16		$\frac{1}{10}$	$\frac{1}{15}$	11+	$\frac{1}{4}$	$\frac{1}{10}$	$\frac{1}{25}$
16—	$\frac{1}{2}$		$\frac{1}{4}$	16			$\frac{1}{10}$
22	$\frac{3}{4}$		$\frac{1}{4}$	16+	$\frac{1}{2}$	$\frac{1}{5}$	
32	$1\frac{1}{2}$	$\frac{3}{4}$		22	$\frac{3}{4}$	$\frac{1}{4}$	
45	3	$1\frac{1}{2}$	$\frac{3}{4}$	32	$1\frac{1}{2}$	$\frac{1}{2}$	$\frac{1}{4}$
				45	3	1	$\frac{1}{2}$

The stops marked + are half-way stops, that is, the pointer is midway between the two stops.

The importance of securing clouds in our seascape subjects is much greater than in landscape work where the sky is often broken up by the foliage of trees and other objects. In marine views this is usually impossible and very often the sky is of as much interest as the foreground. While one can secure the clouds upon the same plate with the foreground, it is not often possible to catch in nature just the right form of cloud. By patiently waiting it is possible to do so, yet this tiresome waiting is hardly recommended, when by the "printing-in" method we get the same result, barring the tedious waits.

Moonlight effects, if rightly handled, make very attractive pictures. Such effects are secured by photographing directly toward the sun when it is behind a cloud or by letting some dark object come between it and the camera, a boat or an old fish shanty, as an example. The sun's path of reflection adds to the pictorial quality. In views of this character the principal interest is of course in the sky and the photograph should be printed quite dark, showing the clouds over a dark foreground. A well-diluted developer will do a great deal toward keeping the delicate gradations in the clouds, and for their fullest value orthochromatic plates, with or without a color filter, should be used.

Excellent photographs of boats in motion can be caught with the box camera, which if enlarged to 8x10 size make excellent pictures. The point of view selected is of importance, a three-quarter front view will be found to give the most



THE RESTLESS SEA

BY JOHN T. DIEBELS
First American Salon

satisfaction. It should be remembered that a great deal of the charm of water views lies in the foreground and it is well to be careful not to cut off too much.

The surf is another attractive subject and if a wide-open lens is used, grand results are obtainable. The waves should be taken as low down as possible, otherwise your photograph will show only insignificant ripples. The least amount of blur is desirable conveying, as it does, the effect of motion. When taking the breakers the camera should not be pointed directly seaward; if this is done the parallel lines of the breaking waves are too monotonous. A good plan is to take the view at an angle, the beach line running across the plate in a diagonal direction. If convenient, find a spot where the beach curves. This will give a variety of oval compositions, exceedingly pretty in outline. For the sake of variety, both beach and water may be included. If the foreground contains neither figure, boat nor other object to lend feeling to the distance, a clump of sea-weed or an old piece of wreckage found upon the beach, may be introduced to break up the barrenness. The sand dunes also form subjects for many photographs and the possibilities of these monuments of the wind and sea should not be overlooked.

For development I use the following metacarboll formula, although pyro answers every purpose:

Metacarboll	25 grains
Sulphite soda (crystals).....	100 grains
Caustic soda	50 grains
Water	10 ounces

Dissolve in the order named, then filter. Dilute with equal amount of water.



THE HAND-MIRROR
by F. E. MONTEVERDE

Developing by the Factorial System

By HARRY L. SHEPHERD

For a number of years Alfred Watkins of England has advocated the timing of negatives in the developer. Sound reasoning, a well-worked out system and numerous examples were brought forward, but the converts made to the new system were not as plentiful as one would expect from a class of workers ever on the alert for new methods of improving their work. The introduction of the developing machine has done much to overcome this seeming apathy of those who would most benefit by a somewhat mechanical method. Prejudice that could not be overcome by sound reasoning, has been compelled to give way before the actual proof as furnished by the results given where the machine was used. It has been found that the trust-to-luck method has little to recommend it in competition with the mechanical work of the machine.

In another publication I had an article on the same subject several months ago, but owing to typographical errors it was somewhat misleading. I will therefore try to make matters clearer by going over it with you once more and endeavoring to explain the system more fully.

I shall not describe the working of the developing machine in detail but only say what I have said above, as I believe the machine has removed a great deal of the prejudice which has kept many from investigating the time method of development advocated by Alfred Watkins, a man who has, I might say, made almost a life study of the proper development of plates. For those unacquainted with the



THE LITTLE MOTHER

BY HELEN P. GATCH



BREAD AND MILK

BY HELEN P. GATCH

time method, or Factorial System of development, as it is also called, I will try to make the matter clear.

The exposure is the dominating factor in the production of a good negative, no matter how you go about developing it. I quite agree that great variations from correct exposure can be compensated for in development *to a certain extent*, if you know how, and this applies much more to over-exposure than under-exposure, *as with an under-exposed negative you cannot produce something from nothing*. The sooner every amateur recognizes the fact that within ordinary limits correct exposure is essential to a good negative, then the sooner he will obtain better work. Now the amateur I mention here is the one who does all his or her work and not the "button-presser."

Do not think that if the correct exposure is, say, one twentieth of a second and you give one tenth or one fifth that you are getting out of the bounds I have mentioned. If, when possible, instead of giving one fiftieth of a second we would give one twentieth or even one tenth and use a diluted developer (no bromide, I speak of pyro), the negative would develop just as quickly and we would have detail in the shadows and not a chalk and soot print.

I go out in, say, September and take an average landscape, trees, bushes, a stream of water or something of that kind. I use a Seed plate, stop U. S. No. 8. Time of day 4 P. M. Bright sun from one side. The exposure I would give would not be less than one tenth, rather one fourth to one half. Say I give it one half



THE RIVER
by F. M. BRADDOCK
First American Salon

of a second. In developing I use the Seed formula for pyro, diluted with an equal bulk of water. I lay the plate in the developing dish, pour on the developer and count seconds 1, 2, 3 and so on while gently rocking the tray. I keep on counting and at about fifteen seconds I quickly lift the plate and hold it to the ruby light to see if the high lights have commenced to appear. To lift the plate I tack a piece of string to my dark-room bench, lay it across the developing dish, then place the plate in the dish and by lifting on the free end of the string the plate is raised out of the dish and you can at once see by the light from the ruby lamp shining through it, whether the high lights have commenced to appear or not. The plate need not be kept out of the developer one half of a second. Well, I raise it from time to time till at twenty-nine or thirty seconds the high lights just begin to show. We will say at thirty seconds.

Now this new system of development is based on the theory that no matter what the exposure may be, the elapsed time between the application of the developer to the plate and the appearance of the high lights of the image always bears a *definite relation* to the time of complete development, *the temperature during development being practically constant*. Now I multiply the thirty seconds by ten, which Mr. Watkins calls the factor. This gives me three hundred seconds or five minutes, so I cover up the developing tray or turn down the light and at the end of five minutes, rocking the tray gently all the time, I take the plate from the developer, rinse it and then place it in the hypo. In my case, with the developer (pyro) I use, I usually take the factor as ten. Sometimes I use nine and at other times eleven. It just depends on what kind of a negative I desire and what the subject is. The longer the development the more contrast till a certain point is reached when the plate begins to fog.

Suppose in another case the high lights appear in forty-eight seconds, then in using the factor ten I would get forty-eight times ten equaling four hundred and eighty seconds, or in eight minutes development would be complete, and so on in other cases. The factor for any other developer can be obtained by a few trials and the factor will vary according to the "make-up" of the developer. To count seconds I use a weight hung on the end of a thread thirty-nine and one-third inches long, which strikes a slip of paper projecting from the wall. Every time it strikes the paper means one second. A watch may be used alone or in conjunction with the weight on the string, which really forms what is called a second's pendulum, i. e., it beats seconds. You will require to develop a few plates till you get the right factor to suit the kind of negative you desire. Different developers require different factors.

The introduction of bromide into the pyro developer introduces complications. If you know the plate is over-exposed use hydrochinone or dilute the pyro developer three to five times. The factor for hydrochinone is about five. As you grow familiar with this new method you will appreciate among other tenets of this "new school of development" the following: "The exposure decides the amount of detail in a negative, and trying to force out detail by adding more alkali or diluting the developer is a hopeless task." (I can say from my experience that diluting the developer will give a softer negative but you will not get any more detail.) Again, "Bromide, to be effective in developing over-exposures, must be added to the developer before it is applied to the plate."

Now use a little more system in exposing. Don't trust so much to chance, but use a Watkins' exposure meter. If you stick to one brand of plates and the developer (pyro, hydrochinone, metol or whatever it is) recommended by the makers of the plates, and develop by the Factorial System you will get negatives of average density and not thin, medium and dense as so many of us do when we rely on chance. After a time you will be able to give a certain exposure and with a certain strength developer you will be able to say beforehand that that plate will be developed in four, four and one-half or five minutes, according to circumstances.

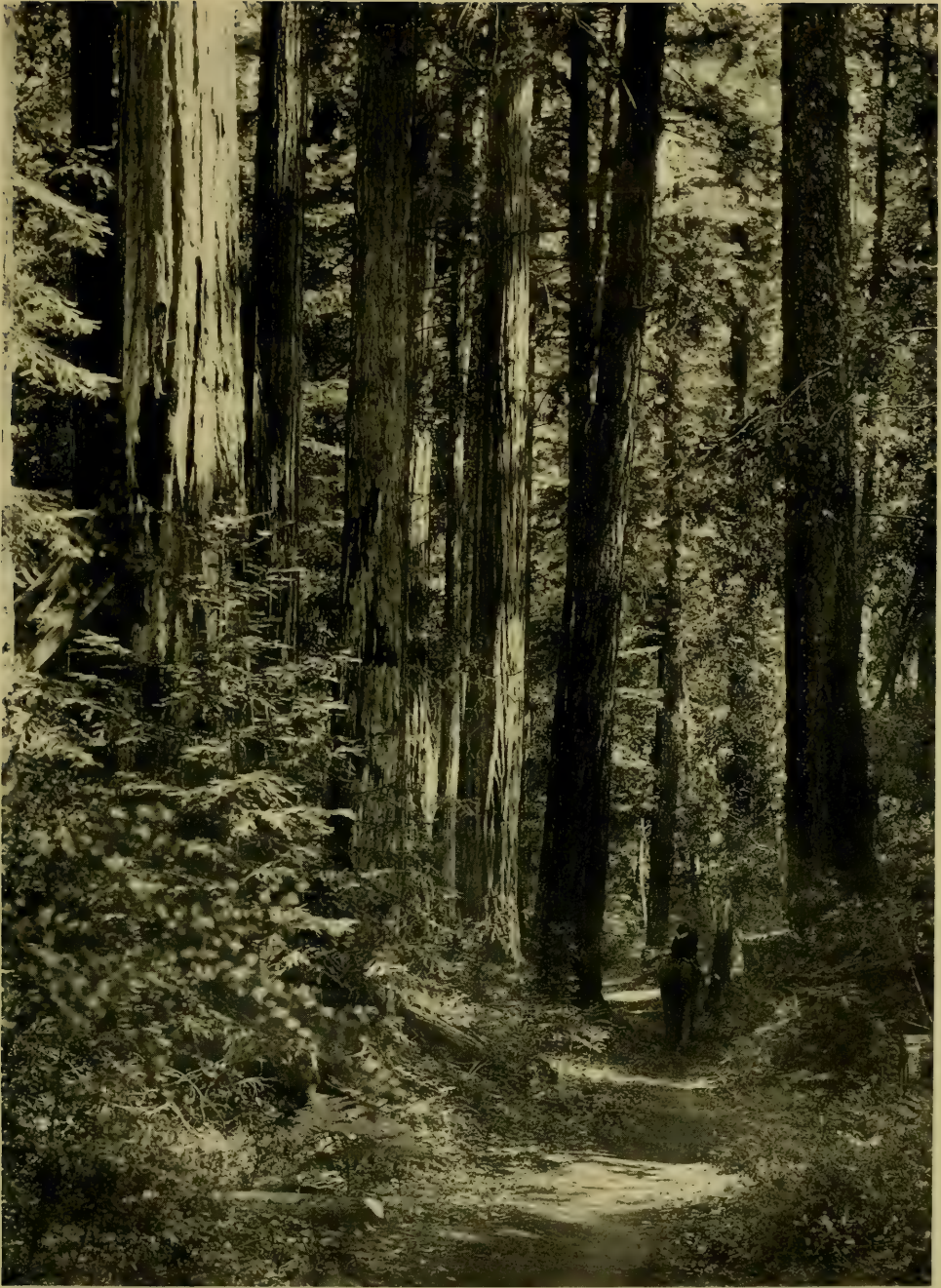
A word of warning: Keep your developer at its best working temperature, sixty to sixty-five degrees for pyro, seventy degrees for hydrochinone. Temperature has a whole lot to do with correct development. Now you see we have arrived at the place where the developing machine makes its claims. A great many objected to it on the ground that it could not develop varying exposures. But as Mr. Watkins says, "Go back a step and give the correct (approximately) exposure." Again, films (also plates) have a good deal of "latitude," i. e., allowable deviation from the time of correct exposure. Some brands of plates have more latitude than others.

In closing let me recommend you to do a little more thinking about exposure. Study the matter a little. You will be amply repaid for the little time it takes. Try the Factorial System of development and give it a *fair* trial. Don't condemn it if you make a failure on your first plate.



A VIGIL

BY HELEN P. GATCH



IN THE REDWOODS
by ALICE HARE



PORTRAIT OF MISS W.
by F. E. MONTEVERDE

Judicious Focusing

By JOSEPH DAVIS

The ambition of the majority of amateur photographers to a certain extent, in the past, has been to produce negatives containing the maximum amount of detail and sharpness. When that was accomplished, they were contented. This applies equally well to a good many amateurs of the present day. I was speaking to one not long ago, who remarked that the more contrasty and full of minute details, the better he likes his negatives. I felt sorry for him from a pictorial standpoint, but arguments availed not; personal likes and dislikes, first, last, and always.

We may ask, why this yearning of recent years for soft effects in preference to those obtained by stopping down and focusing sharply? In the first place, ask any pictorial photographer of repute what his ambitions are. He will tell you, that while he desires to do original work, he also strives for painter-like effects, that he may demand recognition for photography on a more even footing with paintings and other forms of graphic art, and further give his photographs some degree of that suggestiveness which characterizes all good art. I wish to draw particular attention to the words, sharpness and detail. Sharpness denotes clean cut, almost in relief, so to speak, whereas detail may be either of the sharp or of the fuzzy variety. When we say, too much detail in the foreground, the detail in question may be dead sharp or softly rendered. There is, however, a certain class of photographic work requiring fine definition; such as interiors and commercial work of various kinds, but I address my remarks merely to the amateurs who strive to secure pictorial results. The two branches of photography, pictorial and commercial are comparable to ships on the open sea; they salute in passing, no more; the one in the name of photography, the other from a maritime standpoint.

To get down to practical working points; we must try to master tonality and its rendition, by learning to focus correctly, the first result of so doing being the avoidance of harsh contrasts. If this is impossible, focus so that these contrasts will be the less noticeable, relying on after manipulation of the negative to do the rest. Use a more diluted developer than most generally employed and carry development only far enough to bring out sufficient detail yet resulting in a thin negative with printing quality, the thinner the better. I had a fancy for hard negatives at one time, but the older I grow, the fonder I become of thin negatives.

The amateur who can endow his pictures with that tonality which lends suggestiveness and atmosphere depends a good deal on focusing and printing to secure the desired effect. This portion of the scene needs to be subdued; that, brought out with more emphasis; while still others must be entirely eliminated, all of which can be accomplished most effectively by judicious focusing. To explain the theory of background and distance let me give you a simple test: Hold an object at arm's length and focus your eye on it. You see in it as much detail as it contains while everything beyond is less clearly defined, is subdued and subordinated to the principal object. So our pictures must be rendered. The subject needs to be focused according to the amount of detail desired and demanded while

the background must be softened, given an atmospheric effect, more indicative of distance; must be unobtrusive although not so fuzzy as to be objectionable or assertive. Better to have a very sharply rendered photograph than a picture fuzzed up to extremes. When focusing treat in masses; not in minute detail, which is distracting and tiresome. Strive to suggest form rather than have it stand out in hard reality, inviting no imagination. Remember that the human race is endowed with a certain amount of imagination and likes nothing better than to be conscious of its possession.

The employment of a separable lens is a great advantage. Nearly all lenses of late manufacture allow the front or back combinations being used alone, giving different degrees of focus. With a little experimenting we find that an image, softer, and some degrees larger is obtained when using the front or back lens alone than that secured with the two in conjunction. The front lens of some makes, particularly anastigmatic lens, seems to give a more pleasing effect as regards softness and even diffusion than does the back lens or when both are used together. It possesses also the advantage of producing an image some degrees larger. This will be useful to remember when it is desired to place emphasis on certain features or planes in your picture.

My sole object in penning these lines has been to convert record-of-fact photographers from their sharp ways to the paths of pictorial photography. It is to those who are still dubious that I hope to appeal most strongly through the medium of this article. One can easily demonstrate my contention by devoting just one month to the taking of nothing but soft pictures, the kind advised in this article. Suggest, rather than make all vivid, and I guarantee that you will never return to F/64. A new era of photographic delight is opened up to you and you will derive more pleasure and benefit from one picture than from dozens of your former productions.



IN BRITTANY

BY WENDELL G. CORTHELL

Pointed Paragraphs

By HARRY C. RUBINCAM



CHINESE LILIES

BY R. S. REQUA

About the time the first American Salon at New York happened, a woolly-minded Scotchman from Chicago journeyed down to the burgh where the renowned Wouter Van Twiller once paraded his unparalleled virtues, and snooped around to see if he could find any news for his wonderful dispenser of photographic wisdom. The first thing he did, strange to say, was to hunt up Stieglitz, though he had hardly finished publishing statements to the effect that the said Stieglitz was anybody but the kind of a man a God-fearing exponent of the rights of the downtrodden should associate with. Well, this brave and, for the nonce, moral dissipating Scotchman and Stieglitz were soon engaged in the latter's favorite pastime of eating luncheon. During the course of the luncheon it was mentioned that certain letters had been written to certain foreign pictorialists inviting them to exhibit their work at the First American Salon at New York. At that the keen mind of the journalist from the Windy City, ever eager for news, throbbed a couple of throbs and he hastened to make arrangements for photographic copies of the letters that he might reproduce them in his paper. They were furnished him, yet up to this time no sign of them has been seen in the shining light that beams upon the bounding billows of photography from the shores of the great lake. He gave an excuse, but what it was I cannot remem-

ber, except that it was trifling. Strange, thrice strange! That he did not publish them? No, no! That he should have agreed to!

* * * *

Now speaking of those letters reminds me of the story of them. It seems that the European pictorialists all received letters telling them how much America would be benefited by some examples of their work and they were assured that if they would submit some they would be considered *hors de concours*. This, mind you, in the face of the solemn declaration that there would be no invited work. These letters were all nicely typewritten and signed "Sadakiehi Hartmann, for the Salon Committee." In some strange way many of these letters found their way back to New York, where I saw some of them and now have a photographic copy of one sent to Herr Kuhn. Thus was the said Salon Committee "up against it"

and hastily looked around for a way out. The way was at hand. They would repudiate Hartmann. This they did, and announced that Hartmann had written the letters on his own responsibility without warrant or authority from the powers that be (or should I say *were?*). Well and good. Another lie nailed. But then one night I happened to mention this to a gentleman I met while in New York and he gave me what the fraternity that wears six-and-one-eighth hats and eleven-and-one-half shoes call a "horse laugh." Why did he thus coarsely exhibit mirth at my remarks I wondered pointedly and aloud. Because, he informed me, he was with Hartmann when he went to the Metropolitan Camera Club and signed those letters which were already written and awaiting his signature and Hartmann, after signing them, left them there to be folded, put in their covers *and mailed by the officials or employees of the Club*. Naturally I wanted to know if he was certain of this, and he said he had good reason to be, because he blotted the signatures as Hartmann signed them, and he and Hartmann left the Club together as soon as they were signed! Well and good again. More nails!

* * * *

One of the Salon Committee was out with a widely spread offer to make exquisite bromide enlargements for submission to the Jury. Great work!

* * * *

By the way, before I get too far from the subject of letters, let me mention one I saw that an official of the Salon wrote to Demachy, in which, in effect, he said it was a shame that the work of the French had been kept out of America, and he hoped M. Demachy would avail himself of the opportunity the Salon offered him to show Americans what he could do. Demachy must have thought another Rip Van Winkle had just "come to."

* * * *

Some time ago there surged up in the bosom of a Manhattanite the noble purpose of becoming "photographer to the Four Hundred." But alas, alas! I learned while in New York that he had abandoned the idea of brightening the lives of the Four Hundred by permitting examples of his work to adorn their walls, because his employers raised his salary. Thus does the soul of Art ever get it in the neck.

* * * *

I have heard any number of photographers take the most binding oaths that they would never, never again submit any pictures to a Salon. That was after they had tried for several years. Then came the First American Salon *at New York* crowd, who, by the way, were a lot of "hooray" boys and said: "Come on, fellows, this is the real pictorial express. Climb on!" So these same fellows piled on and soon they were hanging onto the steps and leaning out of the windows. Then along came the train crew and pushed off all but a few of them, because there were not enough seats. Now more binding oaths are being taken—by the fellows that were pushed off.

* * * *

One day when I was at the Camera Club a member of the Salon Club of America, and an exhibitor at the Clausen show, came in to see if he could find any members of the Photo-Secession. It happened that Stieglitz, Steichen, Keiley

and Coburn were there, besides a few "tail-enders" like myself. The member of the "S. C. of A." was surprised that no one wanted to bite him or kick him or throw him down the elevator shaft. He was astonished that no one was being pushed around on a little platform on wheels. He marveled that he could not see the portals of the toy-shop or the signs of tin gods. He collapsed when he found that the only qualification for membership is to do something in photography that is really something more than boast and brag and advertisement. All this was contrary to his ideas of the Photo-Secession. It seems that he had formed his ideas from information received from the promoters of the Salon Club of America.

* * * *

And, by the way, you would be surprised to know of the people who have been refused membership in the Photo-Secession because they have not that qualification of having done something besides boast and brag and advertise themselves. If the Photo-Secession was as it is claimed to be, caring for nothing but self-interests, the motives of a great many attacks could be explained by a publication of the list of the declined.

* * * *

One day a friend, in whose office I was, called my attention to what he said was a fine photograph. I probably did not display the expected amount of enthusiasm and he informed me the prints cost thirty dollars per dozen. He seemed to think this an enormous price and he had several fits when I informed him that a certain friend of mine on Fifth Avenue made eighteen prints for a certain New York gentleman for which he charged \$900.00. And, by the way, I might also now mention for the benefit of several misinformed writers on photographic subjects that my friend *really got the money*.

* * * *

Before closing, let me mention that I saw a letter which an official of the American Federation of Photographic Societies wrote to a well-known European pictorialist, in which he said eleven clubs had already joined and fourteen more had made application for membership. When the catalogue gave a list of clubs belonging to the Federation that did not come up to this official's statement I was not surprised, as I had noted the list in the letter included the Denver Photographic Society, which had refused from the very first to join the Federation and persisted in its refusal though they were chided for not coming in when they had put up money for what the urgers termed "the peripatetic exhibition of the vintage of 1897 provided by the Secesh."

A Correction

The excellent picture reproduced on page 97 of our last issue should have been credited to M. Neumann, M. D., instead of Wm. Neumann, M. D., as should also have been the tenth prize-winning picture mentioned in our advertising pages of the same issue.



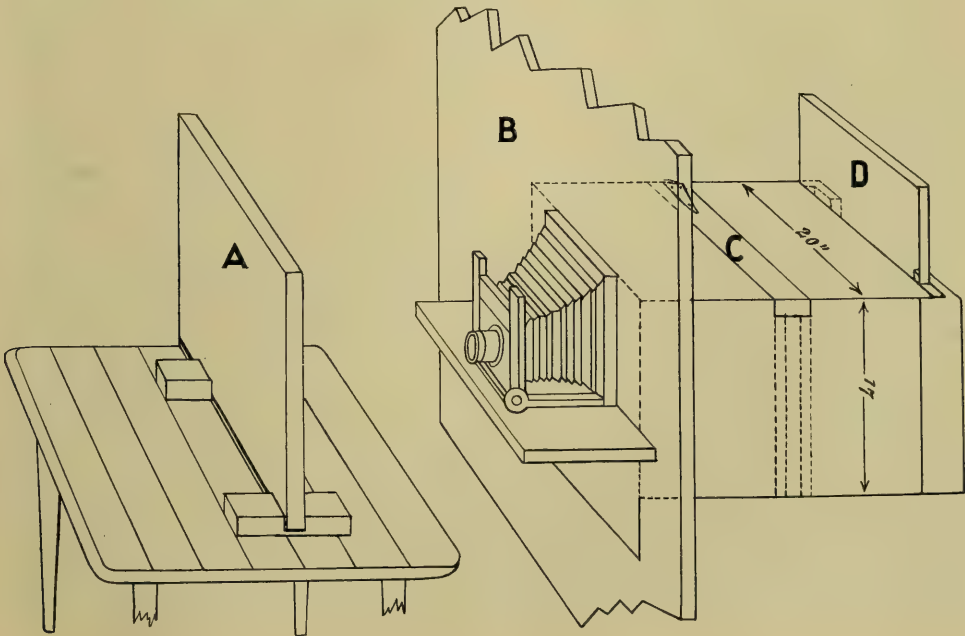
STUDY
by ANNIE W. BRIGMAN

An "Out-of-the-Way" Enlarging Camera

By NEWTON E. ARNOLD

A correspondent some months ago told me about an enlarging apparatus that he had constructed in his basement, and when recently another friend came to me for advice I asked the former for a description of his outfit and from this the latter constructed one that is a constant source of satisfaction. Particularly well pleased is he for the reason that he had all but given up the idea of finding a place where daylight could be utilized. Both friends labored under the same disadvantage. Both found that it required the work of an hour or more to prepare a room by making it suitably dark. Not only this, but the material used in darkening the windows had to be removed and the size of the windows and their number made both performances somewhat of an undertaking. The cellar, being naturally dark and the windows small, suggested itself to the first experimenter early in his quest for a suitable locality. Action would have followed inspiration at once had it not been for the fact that all the books advised a second-story window with an unobstructed view of the sky. Later, however, learning something of the claims made for "Prism Glass," the idea came to him that possibly it might overcome the difficulty and make the cellar a possible available enlarging room.

Work was at once commenced. Two of the three small windows were equipped with snugly fitting frames covered with straw-board and carrying a handle which permitted them to be withdrawn when desired and hung on a nail close at hand. The third window was fitted with a piece of inch board that just filled the casing of the small opening. In the center of the board an opening was made just large enough to hold the 4x5 negatives of the worker. Where several sizes of plates were used the opening was made to take the largest, and kits were used for the



smaller sizes. Just below this opening was built a shelf upon which to place the camera. The back of the camera was removed, the camera placed on the shelf with the back fitting snugly against the board filling the window space. Three strips of wood were nailed to the board, one on each side and one above the back, so that when the camera was again placed in position the back fitted closely inside the square formed by these strips and the shelf, preventing any leaking of light around the sides. Lining these strips with felt adds to the safety they give. The illustration herewith will make the whole matter so plain that little more description is required. The first worker found the windows in his cellar so high that it seemed more logical to hang the easel for carrying the paper from a couple of rails overhead. These rails should have the upper face finished to fit a V-shaped groove in the slide which rests upon them and from which the easel is hung. The second worker found his basement windows lower and used an ordinary kitchen table as a support for the easel, as shown in the illustration. The top of the table is ruled in parallel lines and the boards on the floor serve as markers for the legs. With two table legs on the same crack in the floor and the easel placed parallel with any of the lines on the table top, paper pinned on the board is certain to be at right angles to the axis of the lens.

We now come to the outer part of the apparatus. As shown in the illustration, it is nothing more than a rough box of such a size that a line drawn from the lens of the camera when all is in position, through any corner of the negative, will fall inside the front opening of the box when such opening is far enough distant from the board to escape the walls of the house. In this case it was made a trifle larger than necessary for a reason that will be explained later. The inside of the box should be painted white, one end fastened firmly to the board with two brackets to support it, and the other fitted with a couple of grooves in which a sheet of prism glass can be inserted. This glass receives the slanting rays of light from the sky above and transmits them horizontally into the box and through the negative. This glass also acts as a diffuser, allowing the use of the apparatus with the sun shining directly upon it at an acute angle, or when sheltered from its rays, the only difference being in the length of time required for the exposure. I might add for the benefit of my out-of-town readers that this glass can be obtained quite easily in the larger towns and cities, as it is used quite extensively for illuminating store and office fronts while at the same time shutting out the rays of direct sunlight that may strike them at certain hours of the day.

If you will look at the illustration again you will see that this outside box is fitted with a little trap-door at the top that covers a pair of grooves. These are to accommodate a wooden kit holding an 11x14 positive. The original construction did not have this convenience but the worker wished to use the apparatus for making duplicate negatives. To do this to the best advantage he found that by making first an 11x14 positive from his small negative, he could do such retouching, local intensification, and local reduction as he might wish, much more satisfactorily than would be the case were the positive smaller. He also found that a negative reduced from a large negative had more of the quality of a direct negative than when made from a positive of the same size or smaller. In the new cellar arrangement the making of the large positive meant simply pinning the larger plate to the easel instead of a sheet of paper, but when he came to make a

smaller negative from this large positive the lens could not be racked out far enough. What simpler than to move the positive back by inserting the four strips to form the grooves on each side of the outer box? The matter was easily arranged. Again, our clever worker found that his enlarged negatives, made from these retouched positives, gave him better small prints than his original small negatives. These large negatives were also printed from on small sizes of bromide paper, by inserting the negative in those grooves originally intended for the positives.

The only objection that has ever been raised to the equipment I have described is the fact that daylight is variable. There is no disputing the point but this is of little moment to the amateur. He uses an enlarging camera so rarely, his negatives are so varying in quality and his degrees of magnification are so varied that even with a light of constant value the giving of a correct exposure is problematical. He would have to use test strips if he wished to prevent waste, just as often with one light as with another. With the sun shining on the prism glass slide in the front of the box, using a 4x5 negative to make an 11x14 enlargement with stop $f/16$; an ordinary negative requires about 30 seconds. With the sun on the other side of the house and well along in the afternoon the exposure may be five times longer. A little practice and one will find that the estimated exposure of a test strip will be so near right that one can tell just how much time to add or subtract in order to secure a correctly timed print or other positive.

I believe this description of a practical enlarging outfit that has been tried and found well suited to the work by two of my amateur friends, will be of value to many who are confronted with the same predicament, namely, with no upstairs room available.



ACROSS THE GOLDEN GATE

BY JOHN T. DIEBELS
First American Salon

How To Make a Densimeter

By CHARLES R. OGILVIE

The greatly increased popularity of the developing papers, those of the Velox type as well as the faster emulsions used for enlarging, has emphasized the need of some definite method of ascertaining the correct exposure required, or in other words, a method whereby the worker can determine the actual printing density of his individual negatives. It is becoming more and more an accepted axiom of gaslight-printing methods that the only way in which the best possible results can be secured is by giving the correct exposure in making the print. The small latitude allowable in the case of the faster bromide papers used for enlarging unquestionably hampered the popularity of these papers when used for contact work. The manufacturers of the more modern or slower papers intended solely for contact work were keen enough to recognize this fact and for that reason emphasized the point that a large latitude in the matter of exposure existed. The simple fact that the emulsion was slower justified them, in a measure, and I must confess that passable results are obtainable from prints slightly under and somewhat over-exposed. At the same time, correct exposure, as stated above, is quickly being understood as necessary to a realization of the best results. Many amateurs who were at first enamored with the ease and convenience offered by the gaslight or developing papers have returned to the several printing-out methods, solely on account of the uncertainty inherent in the developing process when worked in the hit or miss manner that seemed to receive little if any discredit from the manufacturers. Of course it can be said in defence of these papers that those workers who failed to realize the necessity of more systematic methods should not receive any great amount of sympathy if their shortcomings caused them to deny themselves the added artistic value of the developing papers. Admitting that their failure is but of slight moment, the necessity of some definite means of arriving at the correct exposure demanded in any particular case is still quite evident. Attempts have been made to utilize the light-measuring power of the ordinary exposure meter but the conditions under which it is designed to prove most useful are entirely different from those which maintain with our printing on developing paper. In one it is a question of reflected light, but in the other it is a matter of actinic density in its relation to light that is transmitted through its various parts.

I wish to say right here that the idea of the meter which I shall attempt to describe is by no means original with me, but an article in one of the English photographic magazines was clipped by a friend and sent to me some years ago with the statement that he believed a meter therein described would be found an improvement on the crude one that I was then using. Such proved the case. I not only adopted the greater portion of the hints given me by this clipping but have since improved upon them in some respects. In my own efforts I had discovered that the construction of a meter suitable to the requirements was not the simple matter I had at first supposed. This was owing to the fact that the deposits of reduced silver in the film of a negative were not relative in their degree of density. I found that the deposit had to be considered as a matter of light-resisting material and that its power could be proved to alter with the density as well with the



THE SUGAR-CANE EATER
by F. E. MONTEVERDE

different colored deposits secured by the use of varying developers, or even with the same developing agent variously compounded.

Take a five by seven piece of glass, an old negative well cleaned of the emulsion is just the thing, and bind it around its entire edge with a strip of dark paper, much as a lantern-slide is bound. Divide the seven-inch edges into ten equal parts and across the plate pass thin tracing-paper or a fine quality of tissue-paper, each piece five inches wide but each a little shorter than its next following neighbor. In other words, cut these pieces and so arrange them that the lower one-tenth portion of the glass shall be uncovered, the next one-tenth being protected by one thickness, the third by two, and so on until the tenth portion shall be covered by nine layers of the paper. The proper way to attach these paper coverings should receive attention. After being cut to the proper size the edging of paper on the glass should receive a coating of paste on one side. The first sheet of tissue is dampened and placed in position. The edging again pasted and another dampened and laid in position, following in the same way with the remaining sheets. When the tissue dries it will be found as tight as a drum with no paste on those portions coming over the clear glass within the boundaries of the edging which carries the paste.

The next matter to receive attention is the securing from this prepared plate a negative with ten gradations of density in the form of bands of varying strength of reduced silver deposit. This is not the simple process that one might imagine. To start with we will place the graduated plate in a printing-frame with an unexposed plate behind it and close the frame. Over or under-exposure will completely destroy the value of the result. For this reason it will be well to spoil the first plate by using it for a test. The printing-frame should be arranged at a distance of about a yard from a well-diffused light, an ordinary gas-burner with a screen of ground glass in front of it answers very well. Covering the printing-frame with a piece of cardboard after seeing that it is perfectly parallel with the diffusing screen in front of the light, the gas is lit and the card drawn aside about an inch for two seconds, another inch for a like period, and so on, turning out the light at the expiration of the last two seconds. It must be understood that these successive exposures should be made in such a position that they cross each of the strips of varying density in our graduated plate, in other words, the edge of protecting cardboard should be in a line with the longer edge of the printing-frame.

The development of the exposed plate should be conducted with great care, using the developer most commonly employed by the worker. If this is of a non-staining quality, development may be started with a dilute solution, changing it to the normal as development progresses. This insures finer gradation, but should pyro, pyro-metol or other developer likely to stain be employed, prolonged soaking in the solution may cause discoloration. The plate should be removed from the developer the moment the clear glass strip at the extreme end of the scale shows signs of veiling. Fixed and washed it is ready for inspection with a view of making what we hope is our finished negative to be used as a densimeter. This inspection should enable one to determine which exposure of the several crossing strips most nearly represents the varying degrees of density produced by the successive layers of paper. If the selected portion shows at one end an amount of density equal to that secured by the worker in his negatives with the successive strips showing a lessening amount down to clear glass in the last strip, the results are successful.

If equal density or like clearness maintains in adjoining strips at their respective ends, the paper is too thick or too thin, or possibly the actinism of the light, if made greater or less, can be made to correct the lack of a full scale. Either the production of a new graduated plate by the employment of paper of different thicknesses or the use of a different light being hardly advisable, we will resort to another plan. Insert another plate and remove the printing-frame to four times the distance, where an exposure of sixteen times as long is required. This lengthening of the exposure time will permit of an additional amount of graduation being introduced to correct any fault that the first plate may have shown. The exposure of the most desirable strip of the first negative being known, the time is multiplied by sixteen in accordance with the rule that illumination decreases with the square of the distance, and the gas lighted. During the exposure a piece of card is raised and lowered in front of the frame in such a way that the shortcomings of the first plate are thought to be corrected. For instance, should the graduations be lacking at the clear glass end of our trial strip it is evident that we must place that part of the present plate down and by raising and lowering the card, decrease the illumination from that end toward the other; contrary, where the other extreme is found lacking. A few trials and a perfectly graduated negative should result. This secured, we pass on to the production of what my English authority was pleased to call "distance comparison sheets."

To produce these distance comparison sheets is not difficult and a number should be made, experimenting with different developers with which we are liable to work, with modifications of these developers and with exposures at varying distances from the light. Taking a piece of black paper we cut in it a series of ten slots, say such as we would cut to allow a silver dollar to pass through. Each slot should come directly over the center of one of the ten strips of varying gradation.

Placing the densimeter negative in the printing-frame and on it this strip of opaque paper, followed by a sheet of the developing paper we commonly use, an exposure is made at a certain distance from the light and of such a duration that the densest part of the densimeter negative allows a faint image to develop in the part left unprotected by the slot in the opaque mask beneath it. This time will have to be ascertained by trial. Calling this densest strip No. 10 it will perhaps be found on developing an exposure sufficient to tint that shade, strip No. 4 will be a deep, strong black, while strips Nos. 3, 2, and 1, show that muddy appearance due to over-exposure. A complete record should be made on the strip of the kind and distance of the light, the exposure given, and the developer used. Removing the frame to twice the distance and multiplying the exposure by four it will perhaps be found that while the image of the slot under No. 10 strip shows faintly and all the rest in added depth of tone until perhaps No. 3 possesses the good black only secured in No. 4 at the last trial. Remove the frame to four times the original distance and give sixteen times the exposure and while the lesser end of the comparison sheet may be slightly tinted as before, our black of desirable richness may have reached to that slot under strip No. 1. For the present we will use but these three distance comparison sheets. Each of the three has of course been marked with full data.

To use our densimeter and the comparison sheets in a practical way it is but necessary to hold it in one hand and with the negative from which it is desired to print in the other, compare the densest portion of the latter with its corresponding

strip in the densimeter's scale. We can, by doing this, at once determine by consulting the strips, at what distance the best results will be secured and we can judge very closely as to the requisite exposure.

As additional comparison strips are made from time to time, increased facilities will be secured for the determination of the correct exposure as well as the particular form or modifications of the developer that will prove most effective in the case of negatives containing peculiarities of gradation, such as a short scale of densities, and the like. These comparison sheets should be carefully made. It will do no good to develop one of them and stop development at the instant that the image of the slot under No. 10 strip shows a faint discoloration. The exposure must be a correct exposure and no more, to produce this slight discoloration when left in the developer for a reasonable length of time. Unless these comparison strips are being made with a view of testing developers of varying composition, a fresh, normal developer should be employed.

As Mr. Clute has so often advised in this magazine, a correct exposure for gas-light papers is such a one that the print will develop up to good strength and cease, or almost so, all gain in strength. This, of course, applies only to those negatives which contain a fairly full range of gradation. In the case of less perfect negatives we must often choose between two evils. A good black in the deepest shadows may have to be sacrificed to a dirtier deposit due to over-exposure in order to secure detail in the more dense parts. With another class of negatives the opposite may seem most advisable. In either and all such cases, our densimeter will assist us greatly in arriving at a quick determination of the best procedure to be adopted.

To adapt the densimeter to enlarging operations, an effective method is to make a series of experiments, using the densimeter in the place of a negative to obtain the correct exposure for varying degrees of enlargement. These comparison strips should be made with the same care as regards detail of manipulation and the filing of date, as was insisted upon for the other sheets. Comparing a negative about to be enlarged with the densimeter and knowing the amount of enlargement required, the same aid to a determination of the length of exposure and form of development should result as in the case of contact printing. Not only this, but the keeping of a record book concerning the making of carbon prints, lantern-slides and the like should soon enable one, by the use of the densimeter and reference to the record book, to determine at once the exposure required and procedure most advisable in these and other processes where timing of the exposure is demanded and modifications of the light or the developer are factors in determining the superiority of the results.

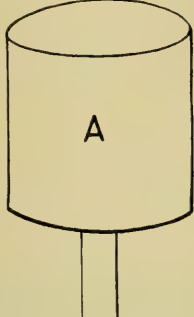
Another convenience that suggests itself in this connection is one in use by an amateur friend who finds it convenient to use several brands and speeds of developing paper. The fast emulsion is printed in an ordinary printing-frame, but slower brands are used in frames, the fronts of which have been issued with the required number of sheets to make the same printing time necessary. As an example: one frame marked "Carbon Velox" carries just that number of sheets needed in order to make a print in the same time as is required on another brand using its own specially issued frame. Working in this way he has but to know the printing time for any one paper and it becomes only a simple matter of selecting the right frame, the one to suit the paper being used, and the time is the same.

A Simple Method of Producing a High-Power Light for the Magic Lantern or Stereopticon

By EDWIN H. KEMP

The Editor recently inspected one of these generators and was so impressed with its value that he asked Mr. Kemp to write the description given below. Information concerning the apparatus will be cheerfully given to those who may write or call on Mr. Kemp, 116 Stockton Street, San Francisco, Cal.

To every one interested in the magic lantern or stereopticon, whether it be used for public exhibitions or simply for home amusement, it will come as a boon to them to hear that the pure oxygen gas which is the product of the oxy-hydrogen or called calcium light), has been invented which is so simple that it can now be made available in every unpleasantness of iron retorts, Bunsen burners and purifying bottles. This has been brought about by the invention of a new chemical compound, oxide of soda, the discovery of a French chemist, and which has recently been placed on sale in several of the larger cities in this country.



The method of using in allowing small portions piece by piece into water, trol the water that it chemical at a time, the diately to cause the genera- to facilitate this process, an has been devised whereby has been made practically the supply of the oxide is quantity of the oxygen has again as soon as a fresh absolutely prevents any

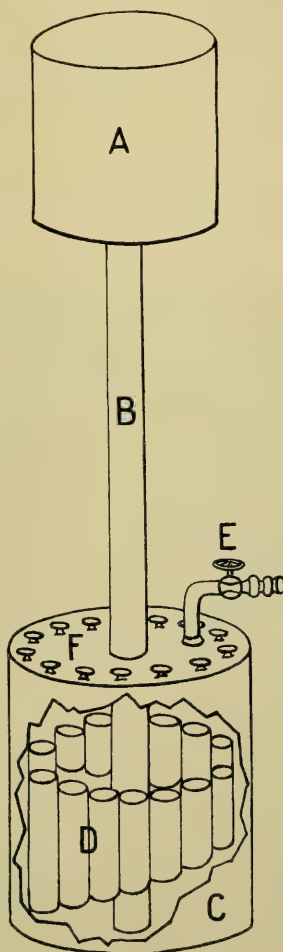
To describe briefly the work: It consists of a tank capacity, fitted with a cover air tight (F). The chemi- on the inside of this tank cover is fitted a metal pipe about three feet long (B), open tank or reservoir (A).

open tank or reservoir (A). After the chemical is placed in position in the lower tank, water is poured in at the top reservoir, which, running down the connecting pipe comes in contact with the oxide of soda in the lowest step of the basket,

method of generating the necessary for the production of Drummond light (also been invented which is so made available in every unpleasantness of iron purifying bottles. This has invention of a new chemisoda, the discovery of a has recently been placed on cities in this country.

this new compound consists of the chemical to drop or, simpler yet, so to contact only one cake of the effect of which is immersion of the gas. In order ingenious piece of apparatus the generation of the gas automatic, that is to say, cut off as soon as a sufficient been produced, continuing supply is needed. This waste of the chemical.

apparatus which does this (C) of about three gallons which can be screwed down and is placed in a receptacle (D). In the center of the one inch in diameter and on the top of which is an



and the generation of gas at once commences. This continues until sufficient gas has been produced to force the water back into the upper reservoir again, leaving the chemical in the higher step of the basket dry, when the generation naturally ceases. On drawing off a quantity of the gas the water rises, and again comes in contact with the oxide and generation commences anew. The whole process is repeated time after time until the supply of chemical is exhausted.

To apply this gas so that it can be used in a magic lantern or stereopticon, it is simply necessary to pass a portion of the pure oxygen through a simple form of carbureter or ether saturater to combine with another portion of the pure oxygen at the tip of the jet; the mixed gases playing on a piece of unslacked lime, cause it to become incandescent by reason of the intense heat of the combined flame. Another feature of the entire apparatus is its portability, the complete outfit knocking down and packing into a case only 10x10x24 inches and weighing about thirty pounds. It is interesting to note that the oxygen produced by this method is declared by chemists to be ninety-nine per cent pure against ninety per cent when generated by the ordinary commercial method of applying heat to a mixture of chlorate of potash and black oxide of manganese until combustion takes place. We think that such a simple method of obtaining a high-power light of about one thousand candle-power will go a long way to popularize the lantern in country places where electricity is not yet available.

Possibly also this simple method of obtaining oxygen may appeal to doctors in country places who desire to administer the gas to patients but who can not obtain it commercially.



JACKSTONES

BY F. E. MONTEVERDE

Another Process of Color Photography

The Editor has been favored with several examples of work turned out by Rudolph Isenmann of Newark, New Jersey. All these samples are landscapes. The blues, greens and browns are shown in various shades and what may be called autumn yellows in the foliage, in some of the examples, cut clearly against the sky, as do also the greens. The arrangement of the colors seems to be influenced entirely by the varying densities of the negative. This is demonstrated in one print where the rebate of the holder has formed the well-known streak of clear glass at the end of the plate. In the print this strip reproduces itself as a bar of color, the center corresponding to the greenish browns in the deep shadows of the print, gradually merging through green to a brownish yellow and finally to a blue at the edge. Warm browns are secured in certain portions of the foliage but reds, Mr. Isenmann writes, he has not been able to produce.

The negative requires no special preparation except in occasional instances. Ordinarily, the regular negative as made by the camera user in his everyday work is all that is required. The ordinary plate, failing to give true relative density values, cannot be expected to produce a print with as good rendition of colors as would be the case were each color translated in its own particular amount of density in the negative. The same negative will also produce prints, more or less satisfactory as the depth of printing conforms to, or departs from, just that amount most suited to the negative. Under-printing results in a predomination of the blues while the other extreme gives a superabundance of that color best described in the samples before me as "autumnal browns and yellows."

The entire process hinges on the bath employed. Any printing-out paper may be used, gelatine, collodion or albumen. No gold is employed as in the ordinary toning bath, and fixing in hyposulphite of soda solution is not done; despite which, Mr. Isenmann has prints which have been exposed to ordinary atmospheric influences for over six months without any signs of deterioration in either the brilliancy or the depth of the colors.

No hand or brush work is employed. This is proved by the bar of gradated color mentioned above. Examined under a strong glass, distant tree branches cut against the blue of the sky with their browns or greens as sharply as does the image in the ordinary monochrome print—in fact, sharper than it could possibly be made to do with the finest brush and steadiest hand, particularly in so absorptive a material as the coating of gelatine papers. It is not made quite clear as to whether one of two solutions are used but the finishing of the prints requires less than ten minutes and is simply the result of flowing or immersing in the solution or solutions. No special talent is required and even a beginner will meet with success just as readily as if making prints in the ordinary way.

Mr. Isenmann goes on to say that his results are by no means perfect; that he has almost despaired of securing the reds, and that he wishes no sensational story made of his achievements. His knowledge of photography is limited, aside from the experimenting he has done along this particular line during the past ten years. Of the possibilities that lie ahead he is not certain. He only feels that he has secured results that show some advance, and results that give promise of greater accomplishments in the same direction. He further advises that it is

impossible for him to answer the large number of letters, nearly all of which contain requests for samples, that have reached him since the publication of an article in several of the daily papers in the East concerning his discovery. He has, however, promised me that he will send a print or two that can be shown as examples of his work. Those which he did send and which are before me at the present moment are such as he had at the time, and show the sharp demarcation of the colored outlines and also the effect of over and under-printing as mentioned above. These are being returned. Mr. Isenmann will furnish *CAMERA CRAFT* with further details for a later issue; at the present time he is unprepared to give more than is here set forth. The process will probably be offered for sale.

Photographers' Association of Pennsylvania

The Ninth Annual Convention of the Photographers' Association of Pennsylvania will be held in Rifles Armory Hall, at Washington, D. C., April 18, 19, 20, and 21, next. There will be no prizes given by the Association, but there will be a number offered by different manufacturers and dealers. The Association will, however, issue diplomas on acceptance of work passing the jury of artists and photographers. Do not fail to attend or neglect to send an exhibit. If you do not attend you will miss the grandest time and the greatest Convention in our history. Washington is the most beautiful city in the world at this period of the year; flowers are in bloom, and the temperature is most delightful for sightseeing.

Armory Hall is the most suitable place in all Washington for a convention. It is centrally located, has a fine light, affords plenty of room; in fact, it is an ideal place for our purpose. A separate room for exhibits and stock-dealers, another for meetings, another for demonstrations, and a fine parlor for the ladies; so bring the ladies. In fact, it has all the conveniences we could wish for; location, room and light. The Entertainment Committee have arranged a program which it would be hard to improve upon. There is no doubt the attendance at this Convention will far exceed any yet held. We have secured some of the brightest minds of our craft to lecture, and Mr. Tirkkuhl, Manager of the Department of Construction of the United States Government, has promised us a fine exhibit.

We have also secured the consent of the best photographers of this and foreign countries, to exhibit the pick of the photographs that were on exhibition at the World's Fair just closed at St. Louis. This alone will be a very interesting and instructive display.

Do not fail to come. I assure you all you will never regret the time and money spent in attending the Capitol Convention of The Photographers' Association of Pennsylvania.

Fraternally yours,

CHAS. R. GATES, *Sec. P. A. of P.*
Lebanon, Pa.

The Quarter Centennial Convention

BOSTON, MASS., January 17, 1905.

The Executive Committee of the Photographers' Association of America met at Young's Hotel for the purpose of making arrangements for the twenty-fifth annual convention. It was decided that the Convention be held on August 8, 9, 10, 11, 1905, in Mechanics' Hall, Boston, Massachusetts, and that the twenty-fifth annual convention shall be called the Quarter Centennial Convention of the Photographers' Association of America.

On motion duly seconded and carried, it was decided to offer \$800 in gold as prizes, and said amount shall be divided as follows: In a Grand Portrait Class, consisting of six pictures, to be not less than thirteen inches one way—First prize, \$300; second prize, \$150; third prize, \$75. General Portrait Class, consisting of six pictures, to be nine inches one way, or less—First prize, \$150; second prize, \$75; third prize, \$50.

All pictures placed on exhibition will be passed upon by a competent Board of Examiners and such exhibits as shall be considered of a high degree of excellence will be awarded a Certificate of Merit. Competitors must be members, in good standing.

RULES AND REGULATIONS

(1) Pictures entered in the competition will be judged on their artistic and technical excellence.

(2) Competition will be permitted in one class only, and pictures must be from negatives made since the last Convention.

(3) Officers of the Association shall not compete for prizes, but may exhibit in the Complimentary Class.

(4) Exhibits may be framed or unframed at the discretion of the exhibitor, but those entered in the competition for prizes must be without glass.

(5) All exhibits entered for competition shall be so marked by the exhibitor.

(6) The name of the exhibitor must not appear on portraits or exhibits entered for competition, but will be placed thereon after the awards have been made.

(7) Application for space in the Art Department shall be made to C. J. Van Deventer, First Vice-president of the Photographers' Association of America, Decatur, Illinois.

(8) All exhibits must be sent *prepaid* to C. J. Van Deventer, First Vice-president, Boston, Massachusetts, care of Mechanics' Hall, and must reach Boston on or before August 4, 1905, and any exhibits not received by that date, or on which charges are not prepaid, will not be accepted.

(9) Space will be reserved for a complimentary exhibit, and all photographers who do not wish to enter their work in the competition will have space reserved in this class.

(10) The Association will not be responsible for any loss or damage to pictures in its charge, but special precaution will be taken by the Committee to insure the safe return of all exhibits entrusted to its care.

(11) No exhibits shall be removed from the hall until after the close of the Convention and then only by permission of the Chairman of the Committee, C. J. Van Deventer.

(12) Box covers should be fastened with screws (not nails), and the exhibitor's home address must be on the under side of covers, to insure the return of the exhibits.

(13) Dues shall be paid to F. R. Barrows, Treasurer, 1873 Dorchester Avenue, Boston, Massachusetts. Membership fee \$3, and annual dues \$2.

(14) Employees, to gain admission to the Convention at the employees' rate of \$2, must furnish certificates from the employer or be indorsed by two active members of the Association.

(15) Exhibits for the Manufacturers' and Dealers' Department should be shipped to J. M. Bandtel, Secretary, Photographers' Association of America, Boston, Massachusetts, care of Mechanics' Hall. All charges must be *prepaid* and all exhibits must be in place on the morning of August 8th, 1905.

(16) No manufacturer or dealer or their representative, will be permitted to transact business on the floor of the convention hall unless he or they rent floor space, wall space, desk room or convention privileges.


All manufacturers, dealers, or their representatives, attending the Convention, will be required to pay the associate membership fee of \$2.

For further particulars, address the Committee on Information: J. M. Bandtel, Chairman, 477-479 Eleventh Street, Milwaukee, Wisconsin.



SEA-URCHIN

BY F. E. MONTEVERDE



CAMERA CRAFT

ISSUED MONTHLY BY

The Camera Craft Publishing Company

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. X.

SAN FRANCISCO, CALIFORNIA, MARCH, 1905.

No. 3

The First American Salon and Its Status

In my editorial last month under the above title, I took occasion to make a few remarks concerning the criticism directed at the First American Salon and those who have fathered the enterprise. This has resulted in much correspondence that a lack of time has made impossible of the personal attention I should have liked to have bestowed. This, in connection with an article published some months ago over the signature of Mr. Zimmerman, has resulted in accusations of partiality. I am taking the first opportunity presented of allowing the other side to be represented. On another page will be found an article from the pen of that keen and able Western writer, Harry C. Rubincam. It may interest my readers to know that this is the concluding article of a series published by one of our Eastern contemporaries, but this particular contribution was found unavailable and for that reason, returned. I might further add that I have Mr. Stieglitz' indorsement of anything that Mr. Rubincam may write. Besides giving our readers an opportunity of comparing the character and mentality of these two men, Mr. Zimmerman and Mr. Rubincam, as expressed in their writings, the publication of this article will justify my claims of fair and impartial treatment. On still another page will be found a letter over Mr. Rubincam's signature. This letter may be replied to in the columns of CAMERA CRAFT by an official or other accredited representative of the Federation, when the discussion must be considered closed as far as CAMERA CRAFT is concerned.

The Convention To Be Held in Portland

The joint Convention to be held in Portland during September is confidently expected to eclipse any event of like character held in this country. The enthusiasm aroused when the proposition was brought before the Photographers' Association of California at their last Convention has only been intensified by the days that have passed since the plan was adopted. Exhibits are already under way, of course only in the formative stage, but nevertheless as certainly in course of preparation as if the frames were being ordered. The unqualified support of the

dealers and manufacturers has in many cases been tendered without the formality of a letter announcing that the event was to obtain at a certain date. The interest displayed by the handsome gatherings which indorsed both the last Conventions held by the sister Associations in their respective territories has demonstrated to all that the possibilities offered by their combined efforts will present an opportunity not to be neglected. L. D. Hicks, a prominent and enthusiastic member of the California Association will leave shortly for Portland and a tour of the other cities of the Northwest and while there will further in every way possible the arrangement of detail work and completion of the general plans so necessary to the carrying out of such an exceptional undertaking. Every photographer on the Coast should, if he has not already done so, make his arrangements that he may be enabled to be present. It is believed that the coming Convention will be of such importance that the securing of the National Convention for San Francisco for the following year will be a matter of little difficulty. We will have more to say on this subject in our next issue.

The First American Salon in San Francisco

The First American Salon in all its entirety, with the exception of four pictures shown by F. Holland Day, will be exhibited in San Francisco during the first two weeks of April. The Editor of CAMERA CRAFT has secured the desired assurance of assistance needed in making this possible. All credit must be given our friends in Portland who, organized as the Portland Society of Photographic Art, have made this attainable by their generous offer to share the heavy expenses consequent upon the necessary shipment by express from Chicago. Credit must also be given to the Toronto Camera Club for their more than generous relinquishment of a previously secured date in order that sufficient time might be given to allow both San Francisco and Portland to secure the Salon on the same routing. The Salon was unfortunately greeted with some of the most disagreeable weather ever known in that city, during its exhibition in New York. Despite this fact, the sales of pictures, we are most creditably informed, greatly exceeded those credited to any previous Salon or Exhibition. In Washington the attendance has been something phenomenal, necessitating an increased order for catalogues soon after the throwing open of the doors. Chicago can be relied upon to give the Salon its usual hearty indorsement and the simple fact that one seventh of the collection was contributed by our Pacific Coast workers should guarantee it a reception at our hands even more unstinted in its enthusiasm and spontaneity.

Those February, 1904, Issues

I wish to thank our subscribers and readers for their hearty compliance with my request that they return copies of CAMERA CRAFT of the above date. Some such copies have come without a letter of any kind. Others have come with the magazine addressed to Camera Craft Publishing Company and a letter addressed to myself. It has been found impossible to acknowledge these intelligently and I must, for that reason, ask all who have sent in the desired copy to examine the date on the wrapper of their next or April issue and should it fail to show the desired extension of time, advise me personally and the matter will be adjusted promptly.

The Amateur and His Troubles

By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

The Amount of Alkali

A local reader writes to ask if there is any particular amount of alkali that can be said to be the best for a given quantity of developing agent. There certainly is a correct amount for the best results where other conditions are all correctly fulfilled, just as there is a correct exposure for a certain speed of plate and a given developer. Von Huble calculated a few years ago the amount of caustic soda required to produce phenolates with the several developers then in use. I can hardly do better than reproduce the results as printed in *Das Atelier* at the time. These amounts of alkali give the best results. If it is desired to use other alkalies the figures in the first column must be multiplied by the factors given as follows: Caustic potash, 1.4; potassium carbonate, 10; sodium carbonate, dry, 8; and sodium carbonate, crystals, 16. Amidol requires no alkali and the caustics should not be used with pyro or metol.

	GRAMMES	GRAMMES
Pyrogallol	9.5....	0.3 to 0.6
Pyrocatechin	7.2....	0.6
Hydroquinone	7.2....	0.5 to 1.0
Glycin	4.3....	1.0
Audurool	4.2....	1.0
Paramidophenol	2.8....	0.4 to 0.7
Metol	2.3....	0.6
Eikonogen	1.5....	0.8 to 1.5
Diogen	1.2....	1.2
Amidol	0.4 to 0.8

The figures in the first column give the amount of caustic soda to be used with every ten grammes of developer, and those in the second column the amount of developer to be used in every hundred cubic centimeters of solution. I have not taken the trouble to

work this table out in our own weights and measures, preferring to give it just as published at the time. The main point I wish to emphasize is that there is a much wider difference than is usually supposed in the amount of this or that developer and alkali that should enter into a developing solution. The average amateur imagines that he has simply to substitute an equal amount of either in any given formula when it is desired to give another developing agent a trial.

Some Neat Bottles

Another dark room that I had the pleasure of inspecting recently disclosed the neatest array of bottles that it has been my good fortune to see for a long time. Each was labeled in clear glass letters on a roughened surface and in the case of those labeled "Developer A Solution" and the like, there was a neat square of ground surface below the words on which the formula or date of compounding could be written in pencil. Inquiry elicited the information that the job had not been an expensive one, for the reason that the bottles were all prepared for the sand blasting before the work was given out. This preparation consists simply of preparing a stencil of tough manila paper and pasting it securely on the bottle in such a way that all parts, including the entire surface of the bottle that is not to be roughened are covered to protect it from the cutting of the sand used in the blasting process. One will be surprised at the ease with which quite small letters can be cut from this paper by first drawing them in. Even the production of a neat monogram is not very difficult. This friend who showed me the result of his efforts in that direction was fortunate enough to have

as an acquaintance a gentleman in the building trade who placed a large amount of orders for the production of specially ornamented glass for doors and the like, and when it was explained that there was no hurry about the job, the glass engraver willingly offered to blast them at some convenient time, without charge.

Some Neat Post Cards

I received a post card recently from one of my correspondents that was quite striking. It was printed with a neat little marine view in blue surrounded with a design of ropes, tackle-blocks and anchors in brown. I asked how it was done. The idea would, of course, be equally applicable to Easter greetings and other forms of cards. The process is quite simple, at least, taking into consideration the beauty and originality of the results. The first thing to do was to draw the design for the border on a large sheet of white bristol-board, seeing that the proportions of the card to be used were maintained. This was photographed so as to secure a design of exactly the right size to fit the dimensions of the card. The center must be rendered entirely opaque if not so in the negative. Returning to the card, it is better to buy a good grade of stock and have it cut to the desired size. If post cards are the aim, they should be sensitized with blue-print solution and printed under a mask with an opening just the size of the opaque center of the other or border negative. The print is developed as usual and when dry the border of the card is sensitized with gum-bichromate solution in which the desired color has been incorporated. In the case before me, burnt sienna was used. The cards are allowed to dry and then printed under the border negative. The results are very pleasing, one color helping to set off the other and both gaining thereby.

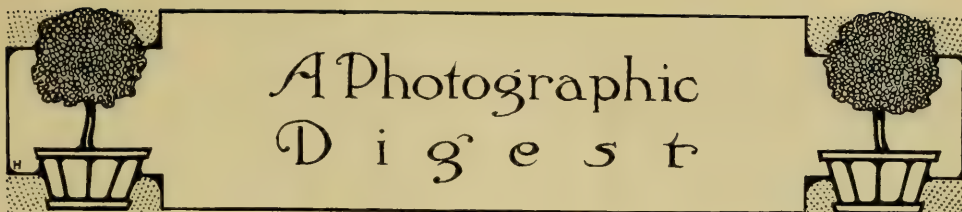
A Developer in Tablet Form

A correspondent in Canada asks if I can suggest a method of preparing a developer that will be neither liquid nor powder and require only dissolving in water. My correspondent can hardly expect that I have myself experimented in the production of such an article and hence he will not be disappointed if I give him only the most reliable directions at my disposal. The *Bulletin* of the Photo Club of Paris gave a recipe over a year ago which should prove

of value. The preparation is achieved as follows: In a porcelain capsule dissolve by the aid of gentle heat 80 grams of sulphite of soda in 122 cubic centimeters of water. To this solution add 20 grams of hydroquinone and one cubic centimeter of a one-half per cent solution of eosine. The solution is next brought to the boiling point and 160 grams of potassium carbonate added. The heat should be maintained, and one should constantly stir the mixture with a glass rod until a pellicle forms on the surface, when it should be poured out into a flat pan and dried on a sand bath at a temperature of about 80 degrees (centigrade). In about an hour the mass will have dried sufficiently to be cut in pieces but six hours will be required to secure complete drying. One gram should be dissolved in 20 cubic centimeters of water for use. Using the same sized pan and the same amount of material, one should be prepared to determine the exact size of the squares to be cut in order to secure tablets approximating very closely any desired weight.

A Dark-Room Convenience

The dark room of an acquaintance of mine showed me a convenience the other day of which I remember reading, but one that had entirely slipped my memory. It was a piece of ground opal glass with the edges smoothed and the upper edge perforated with a hole to allow of its suspension by a stout cord. It comes in very handy in a great many cases. One may be using a new developing formula, the details of which are too complicated to trust to the memory. It is a simple matter to jot down a few necessary notes on this tablet which can be easily referred to as it hangs conveniently near the ruby light. Again, during the process of development we may wish to make a note of some peculiarity bearing upon future treatment of the plate. The page of our note-book can be easily copied onto this tablet if we be one of those methodical persons and appreciate the difficulty of making use of the book itself while fingers are moist and the light rather poor. In fact, uses for the convenience will suggest themselves as one avails himself of its use. The article which I remember reading advised the use of a sheet of ground glass but I believe the ground opal glass would serve a better purpose.



By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Spectacle Lenses

The use of these lenses has within the last few years attracted considerable attention, and in France has received the indorsement of some of the most prominent pictorial workers, notably Major Puyo. Some months ago Dr. Trutat published an article in the *Revue de la Photographie Suisse* on the subject in which he says that in portraiture they are to be preferred to corrected lenses, not only on account of the way in which their diffused focus eliminates the necessity for retouching, but particularly for superior modeling and aerial detachment. In spectacle lenses the visual and chemical foci do not meet on the same plane, so that after focusing a correction has to be made to rectify the difference. This may be done in various ways. The bellows may be shortened according to the focus of the lens. Dr. Trutat gives the following table:

FOCUS	CORRECTION OR DIAPHRAGM
30 c.....	6 m.....10 m.
40 c.....	8 m.....10 m.
45 c.....	9 m.....15 m.
50 c.....	10 m.....15 m.
60 c.....	12 m.....20 m.

or by the use of a diaphragm of the size given in the third table.

In answer to a correspondent *Photography* suggests the following expedient:

"A simple and convenient method of getting over the difficulty is to have a lens cap made and glazed with cobalt blue glass, and use it in focusing. This will cut off most of the yellow rays, and the image will be formed practically at the chemical focus of the lens. A violet screen would be even better, but would have to be made with

dye, as glass of that color is not easily obtainable. It is not necessary to keep the screen on the lens during exposure. If orthochromatic plates are used, and a prolonged exposure is not objected to, then a yellow screen may be used both in focusing and during exposure. A screen dyed with naphthol yellow, or with picric acid, requiring about three times the normal exposure, would serve the purpose."

The best spectacle lens to use for this work is that known as a convex periscopic. Owing to their size these are unsuitable for large head, etc., such as engaged the attention of the French pictorial workers, and to meet their requirements M. Morin of the spectacle lens factory at Ligny, France, has made the larger sizes.

Gum and Carbon Prints on Japanese Paper

The following directions given by *Photography* should enable carbon workers to add some novelty to their work:

"While the greatest advantage of the carbon and gum processes is the scope they afford for the exercise of individual taste in the matter of the paper or other basis for the print, there have been limitations imposed upon those who work the processes by the nature of the beautiful Japanese papers, which except in a few instances have not been capable of any employment which involved wetting, without a preliminary sizing which destroyed a good deal of their charm. In Mr. Stieglitz' very beautiful *Camera Work*, the latest issue of which has just come to hand, Norman W. Carkhuff describes the method he has adopted to overcome this defect—a method which is the

result of nearly a year's experimenting. Assuming that the reader is familiar with the single transfer process, directions are given herewith for making single carbon transfer prints on Japan tissue with ease and certainty."

PREPARING THE TISSUE

"The Japan tissue is placed on a glass support, the paper being cut somewhat larger than the glass, when it is coated with a plain collodion made up as follows:

Alcohol, sp. gr. 0.81.....100 parts
Ether, sp. gr. 0.72.....100 parts
Pyroxyline 3 parts

Old celluloid films can be dissolved in amyl acetate, or equal parts of alcohol and ether, and used for the same purpose."

COATING IT WITH THE COLLODION

"With a camel's-hair brush, about one inch in width, commence at one edge of the paper on the glass support, and as rapidly as possible, using the collodion freely, coat the whole of the paper, at the same time pressing it into contact with the glass as intimately as the brush will permit. This first coating should thoroughly dry, when it will be found that the paper will be drawn perfectly flat to the glass support, if the coating has been properly done. Two or three additional coats should be applied until the pores of the paper are closed, but not enough of the collodion used to give the Japan tissue support too much gloss and destroy the texture of the paper."

USING THE TISSUE FOR CARBON WORK

"After the paper on the glass is dry, bend back the surplus paper over the edge on to the back of the glass support, and hold it there by placing it on another glass, keeping the two together during the development of the carbon print. This will prevent the water from getting between the print and the glass, and lessen the possibility of tearing the print. Sensitize the carbon tissue and print as usual. When ready to squeegee the printed tissue to the prepared Japan tissue support, immerse the print and the tissue support in the water at the same time and squeegee as usual. No previous soaking of the tissue support is necessary. In twenty minutes development can proceed as usual. The print during development should be examined with some white opaque substance behind it, or it will probably dry out too dark."

FINISHING THE PRINT

"The finely divided coloring matter can be thoroughly removed from the print, when sufficiently developed, by flooding with alcohol *once*, in the same manner in which a plate is flowed with developer. The print can now be rinsed and placed in alum or sodium bisulphite to eliminate the bichromate, washed again, and permitted to dry on the glass support. After drying, it should be carefully stripped from the glass and is ready for mounting."

SOME USEFUL HINTS

"The tone of the picture can be modified by backing the print with colored paper. If old collodion is on the glass, the print will be almost sure to stick. Rubbing the glass with talc will facilitate the removal of the print. If the collodion is *flowed* on the paper, the result will not be satisfactory; the collodion *must* penetrate the paper instead of setting on the surface."

GUM-BICHROMATE PRINTS ON TISSUE

"Gum-bichromate prints can be made on Japan tissue paper by the same method, giving but one coat of collodion, permitting this to dry thoroughly, then coating with the gum-bichromate mixture and proceeding as usual in working this process."

The Control of Gradation in Printing

Although the methods here described are, doubtless, known to some photographers, there are very many to whom they are quite unknown, and to those who desire to make the best of any negatives which are lacking in gradation, the knowledge may be welcome. It should, perhaps, be stated at the outset that, to those who are chary of a little extra trouble, the method may not commend itself, but those who place results and quality first will find it worth a trial. We may desire to improve a negative which is "hard," one in which the details in the thin part, although perfectly visible, are hopelessly over-printed before the light has sufficiently penetrated the thicker parts. Or we may have a negative of an opposite character, one which is "flat" in gradation, and in printing off which, the high lights are done before the shadows, the resulting print lacking force and contrast. Now both these negatives can be made to yield good prints, and the advantage of the method is that

the gradation is corrected all along the scale, and not merely at one end or the other, and further, that the negative itself is not interfered with. This is, of itself, often a great consideration, as a valued negative may easily be spoiled by the usual chemical reducer. Briefly, the method consists, in the case of the "hard" negative, of *neutralizing* it to the necessary extent, and in that of the "flat" negative, of *duplicating* it, thus controlling the light which falls upon the different parts.

We may consider the word "hard" negative first. Let us take a negative and a print from it, and, placing the two together, look at them by transmitted light. On making the two register, or coincide, the negative disappears, being completely neutralized by the print. If now we make a *very light print*, and do the same with it, we find that the print masks, or protects in a degree, the thinner parts of the negative, a print taken under such conditions being *flattened* in gradation. To increase the contrast in the "flat" negative is a little more trouble, as we must first make a full print, and from this produce a paper negative. This being placed in front of the original negative, protects, or masks it in the same proportion or gradation as the negative itself. This much having been explained, we will now proceed to the details of practical application. P.O.P. is a suitable process to produce the masks in, and if waxed, printing takes less time. The masks should be half an inch or more larger on each side than the negative, to keep the light from creeping in under the edges. A printing-frame a size larger than the negative must be used, and the negative, being placed therein, requires packing with a strip of cardboard slightly thinner than itself—on each of the four sides—to keep it from moving. The mask is not attached to the negative, but to the outside of the glass of the printing-frame, and must be placed in position by looking through the negative. A good plan to attach the mask is to gum a strip of stout paper to each of the two long sides, and to fix it to the frame by drawing pins, careful register being made. The reason for placing the mask in this position is that it must be get-at-able. Unless the negative requires very much correction, it is quite likely to be over-corrected, and being so placed, it is readily removed when required, and the printing completed without it. Of course, the mask may be produced on a plate if preferred—the expense is greater,

and the only advantage is in quicker printing. This method will be found to be altogether superior to the matt varnish, or tissue-paper and black lead usually resorted to. The depth of the printing of the mask will, naturally, depend upon the degree of short-coming in the negative, but it will be surprising to find how slight a mask is required. —English *Amateur Photographer*.

Fine Focusing Screens

I have seen and tried many receipts for obtaining the above; here is a new one, reported by *Photography*, which it is to be hoped is better than the unsatisfactory average:

"The following method of treating a focusing screen in order to get the finest possible surface, so that if necessary a powerful focusing-glass may be employed to get critically sharp definition, was given in the *Camera Club Journal*: The glass is cleaned perfectly in hot soapy water with some soda dissolved in it, rinsed, and dried. Over it is poured a mixture of beeswax (120 grains), yellow resin (120 grains), and turpentine (20 ounces), draining off excess, and leaving the coating to dry of itself. When dry the plate is heated in the oven or over a gas burner, until the coating becomes fluid, and at once wiped with a bit of flannel, and the still hot plate is polished with a clean piece of the same material."

Potassium Persulphate in Development

Writing in the English *Amateur Photographer*, C. Winthrop Somerville makes the following valuable remarks:

"The use of bromide of potassium is such a valuable adjunct to the process of development that it seems almost unreasonable to suggest its abolition in favor of another reagent whose power in the same direction is not so good. But bromide of potassium has its drawback. It clogs the shadows when used with a strong developer in combination with excessive over-exposure. Also with under-exposure its use is practically prohibitive. With dilute development the small amount of bromide necessary renders it almost ideal in its action, but where large numbers of negatives or prints are required, dilute development is not practicable in most cases. What is wanted, therefore, is a reagent which will restrain development while at the same time steepen the gradation

if necessary, and keep the separation of the tones distinct and complete.

"While carrying out some investigations for another purpose, I had occasion to use the persulphate of potassium, and noticed some very definite peculiarities in its action during development. With excessive over-exposure, development was retarded to a rather less extent than when using the same proportion of bromide, but the various tones in the gradation scale were very perceptibly maintained in the deepest shadows while the lighter tones were inappreciably affected. On the other hand, however, the shadows, instead of accumulating a disproportionate density, and, what might be called, for want of a better expression, hardness of deposit, as would be the case with bromide, assumed a general softness in combination with a slighter gain of intensity. This feature is of more value in negative and lantern-slide work than with bromide paper, since with the latter its visibility by reflected light causes it to appear rather muddy. Beyond this there is a general softening effect over the whole scale of gradation, so much so that if used in excess there is danger of veiling the emulsion. I do not think this is actual fog, but I have not yet made sufficient investigation to definitely ascertain the nature of the reaction. With under-exposure this peculiar softening action may well be turned to account; also in the case of normal exposures on subjects presenting harsh contrasts, and portraiture.

"Potassium persulphate is purely an oxidizing agent, although its properties in that direction are not very energetic when used in reasonably dilute solution. The ammonium compound is the well-known reducer, as it is also the hypo-eliminating salt sold under the name of "anthion." There is, however, a marked difference in the reactions of the salts of the two bases. The salt may be conveniently made up for use in a ten per cent solution, and may be used alone for special purposes as described. I believe, however, it is much better used in direct combination with the bromide salt. In this way we obtain a combined effect; and to such an extent that I have been able to completely control over-exposure to the extent of fifty times and maintain the separation of the tones in the deepest shadows.

"I have found it of great use in transparency work. Here there is always a danger of hardness when brilliancy is striven for, and a judicious combination of the persul-

phate and bromide salts has a wonderfully beneficial effect. It may be incorporated in the concentrated developer, but as I always discourage this practice with bromide, I do so with this reagent, preferring to add it to the developing solution either immediately before or after application. When incorporating it with bromide, the proportion should be about one and a half times greater, i. e., to every ten minims of bromide add fifteen of persulphate. If used alone, double the proportion of bromide generally employed. It follows that its use with hard developers of the hydrochinone and glycin type should be advantageous, especially in the case of stand development. It is quite possible to apply a one per cent solution to an exposed emulsion previous to development."

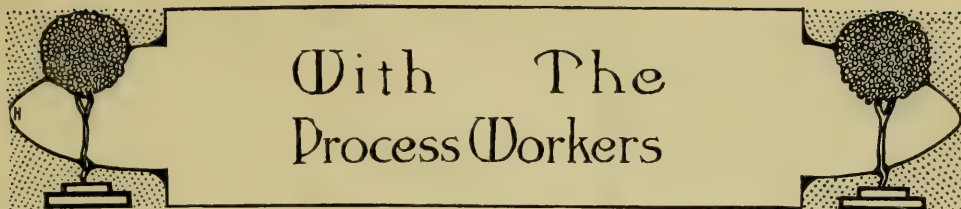
Timing Shutter Speeds

The following method, by a writer in the English *Mechanic*, may prove useful:

"I rotate in bright sunlight on a small electro-motor a wood lath carrying at one end a small spherical mirror (with balance weight at the other) in front of a graduated paper circle, two feet, six inches in diameter. The back end of motor-axis is attached to a revolution counter. After the motor has been started, the revolution counter is read, and a stop-watch started simultaneously, and exposures are then made. The watch is now stopped while the counter is being read and the interval of time, compared with the revolutions shown by the counter, will give the time of one revolution, which may be a second or less (as required) according to battery power; and the short, bright arc produced by the mirror, when referred to the graduations, gives the duration of exposure." This method is obviously not applicable to focal-plane exposing devices, but it ought to give quite reliable results in the case of shutters close to the lens. Devices suitable for measuring the speed of focal-plane shutters are described on p. 25 of the English *Amateur Photographer* for July 9, 1903, and p. 106 of the same Journal for February 5, 1903.

When Prints are Fixed

The *Photographic News* gives a good hint in a recent issue when it suggests that a strip cut from an undeveloped plate be introduced into the bath at the time the last print is inserted. The clearing of this strip clearly indicates that the prints are fixed if they have not been allowed to mat together.



By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

The Last of the Pioneers of Collodion

The death of Frederick York, on December 17, 1904, at the age of 81 years, ended the career of the last of the pioneers of photography, both mechanical and pictorial. Mr. York died in Bridgewater, England, and in his youth was one of the first men who endeavored to make a cut by photo-mechanical means. He was a co-worker with Fox Talbot, who may be said to be the pioneer photo-engraver. His method is really the one used today; only now it is perfect. Mr. York was the man who stood up for collodion in the days when others were against it. His career was most interesting.

Intended for the law, a few months in the office convinced him that he had no vocation for the profession, and so the articles were not signed. He was apprenticed in 1839 to a chemist at Bristol. At that time Fox Talbot's discovery attracted general notice, and Mr. West, of the Observatory at Clifton, made photogenic paper, and sold it to chemists to retail at one shilling a packet. It was used principally for printing fern leaves, lace, etc. This was his first introduction to photography. In the winter of 1853, when residing at Bath, he had severe hemorrhage from the lungs, which confined him to the house for four months. The doctor advised his going to a warm climate, and he decided on going to the Cape of Good Hope, which he did the following year. He called on a friend, Mr. Cogan, of Bath, to have his portrait taken, and having told him of his plans, he suggested his going in for photography, and kindly offered him every assist-

ance and the use of his studio. Although daguerreotype was then the recognized process, his friend was working collodion—in fact, was one of the pioneers of that process. On his arrival at the Cape, in January 1855, he found there was an opening, and he decided on abandoning physic for photography. The things he took out were soon used up and could not be replaced for five months, as there were no steamers running to the Cape at that time, and collodion there was unknown. Iodide or bromide of ammonium could not be obtained. The Dutch ether turned blood-red when iodides were added, and the spirit of wine was so carelessly distilled that it was almost useless. He had to redistil both ether and spirit, to make guncotton and the iodides and bromides of ammonium; and nitrate of silver he made out of Mexican dollars. He mastered it all, and may be considered the first who introduced the collodion process into South Africa. Contrast all this with the facilities of the present day, and this raises the thought of how few photo-engravers there are, even those considered master-workmen, who could do what Mr. York did over half a century ago.

Beveling Three-Color Blocks

Many printers make complaint that the bevel on the three-color blocks often interferes with running the plates on the new patent bases. To make money from three-color printing it is necessary to run several plates at the same time, and in order to get them to register it is necessary to use

the patent bases. A three-color cut made on the same thickness of copper and beveled the same as one ordinary black cut can scarcely be used on these bases for the reason that the clamps bend the thin bevel and even refuse to hold it. The thin copper also necessitates the cut being underlaid with heavy cardboard. If the photo-engraver can do it he will help the printer and also help himself, if he will put three-color cuts on heavy copper or zinc and not cut the bevel too low.

I was enabled to make the three photographs which show more than any number of words can tell the right way and the wrong way to photograph a painting. The picture, which is entitled "Fading Day," is almost orange green in tone. The rich foreground contains browns, purples and greens, and shades off into the delicate yellow of the sky. The picture contains neither white nor black. The photographing of every oil painting is more or less of an experiment. But nobody can do this work successfully unless they



FADING DAY

No. 1. Photographed from an oil painting by Wm. Keith. The negative was made on a Cramer Isochromatic plate through a canary-colored ray filter. This gives the visual effect of the picture.

Photographing Oil Paintings

Although the work of photographing an oil painting is not always done by the photo-engraver it is generally done for him. The idea of photographing a painting is to keep the "visual" effect of the picture. That is, to make the black and white reproduction produce the same effect of light and shade as the colored original. This can only be done by matching the tone of the picture with the ray filter and the plate. A delicate yellow produces the effect of light to our eye but to the ordinary photographic plate it is quite dark. Through the kindness of Wm. Keith, the great landscape painter,

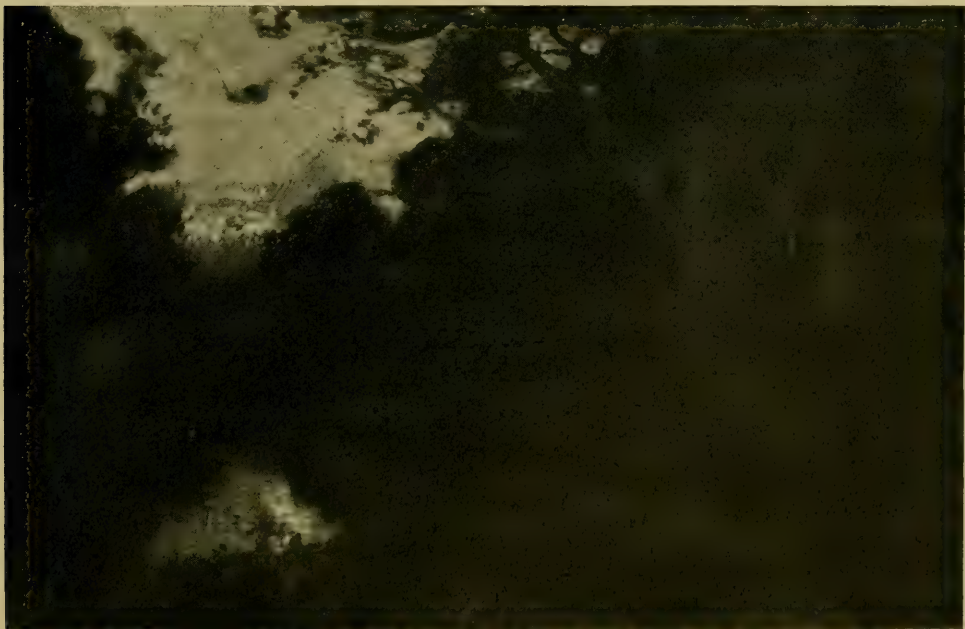
know just what the visual effect of the picture is. In making the negative for No. 1 I used a Cramer fast isochromatic plate and a canary-colored ray filter. The exposure was all the plate would stand and was developed with a four per cent solution of rodinal. It will be seen that while the sky is luminous the greens of the foreground have had a chance to impress the plate, owing to the fact that the filter was not dense enough to shut out all the blue rays. No. 2 was made on the same kind of a plate with an orange filter. It took about twice the exposure. In this picture nearly all of the blue rays were shut out with the consequence that the green "took" black.



No. 2. Photographed from same painting. Made through an orange-colored filter. Contrast is too violent.

The filter did not harmonize with the tone. Not only is all the yellow out of the sky but the orange and red have started to go, producing too violent a result. No. 3 was made on a Seed 26X without any ray filter.

Here it will be noticed that we have tone but no visual effect. The great perfection of the picture produced the contrasts by colors alone and it so happened that the plate was not sensitive to any of them.



No. 3. Photographed from the same painting. Negative made without any ray filter on 26X plate. Result, tone without contrast.

Three-Color Negatives by Flashlight

What must be looked upon as an innovation in the three-color business is a method of producing the negatives by flashlight for which a patent has just been asked in England. The inventors make great claims for the process, the principal ones being speed and uniformity. Scientifically it is all right (theoretically), but what it will do practically only time can tell. But one thing is certain, it is the simplest process yet devised and up to its full limit anybody can do it. Only a fool could fail to follow directions, but a man of the widest experience could not make the work any better than it will come. To work the process all that is necessary is the red, green and violet flash-powder and the three plates to match each powder. The powder comes in cartridges each containing enough for an exposure. After exposure the plates are all developed in the same tray for the same length of time which gives the same density for the whites. Of course no screens are necessary. The only limitation to this process is that it must be done at night. It may be that this is the coming process, but at present it must be considered merely as an experiment, or perhaps a curiosity.

A Wandering Half-Tone Shop

The big half-tone engraving houses in England are much concerned over the appearance in the business of a "traveling" shop. The owner of the shop claims to have all he can do and is cutting into the big fellows' mail-order trade. To the average workman it will seem impossible to turn out cuts almost anywhere, at a few minutes notice, with such tools and apparatus as can be carried in a small spring wagon. But it is only a matter of thinking. Of course there are limits to what the traveling shop can do and the work may not be equal to that of the best stationary shops under the best of conditions, but it satisfies the demand for such work. To begin with the traveling shop makes only half-tones and those no larger than 4x6 inches. Dry plates are used for the negatives which are developed in a developing box that can be used on the street corner. The cuts can only be of certain sizes as the print is made on plates already beveled. Of course these are carried in a large variety of sizes so that almost every demand can

be met. With a reversing prism, a folding camera-stand and a tiny printing-frame it will be realized that all the paraphernalia can be packed into a good-sized trunk.

Imitating Crayon Tint

It frequently happens that the photo-engraver is called upon to make a tint block with white letters on a crayon ground to be printed in connection with a black outline oil. Of course the stipple machine is the most general way of doing it, but every shop does not own a stipple machine. Here is a simple and effective method. Make the offset as usual. Then paint the letters that are to be white with thick gum arabic and allow it to dry. Now go to your powder box and put a small box or bowl in the center. Then fill your brush with powder and shake it out so that the air is filled with very fine particles. Now lay the plate on the box and carefully close the lid. The fine particles will settle all over the plate making the most perfect crayon effect. Lift the plate out carefully and heat it until these fine particles melt. If the plate is now held under the tap the letters or other patterns that have been painted with gum arabic will wash off leaving the clear zinc. Etching, of course, will proceed as usual.

The "Rush" Habit

Robert C. Kroll, in the *Progressive Printer*, has the following to say on a very important subject. Every photo-engraver should see that it reaches some of his customers:

"A good cut is one that enables the printer to produce impressions that compare favorably with the original. This at least is the recognized standard of merit, and printers should bear it in mind when they contemplate reproducing a time-worn copy. When engravers deliver cuts which are below their usual standard of quality it will be found that the inferiority of workmanship is nearly always due to the great haste of the customer. Advertisers as well as printers have a habit of keeping work locked up in their desks until the last minute when they suddenly realize that they must have the work at once, and the copy is sent in with orders to *rush*. It is true that a cut can be made in a few hours; but, whenever that is done, the engraver loses in money while the customer loses in quality."



Club Notes



News Items From the Various Camera Clubs

By C. A. GOE

Chicago Camera Club

A neat folder reached the Editor's desk recently from this most energetic organization. Besides a list of the officers and committees, together with information as to object, membership and dues, this folder contains a program of three months' dates for lectures, talks, and exhibitions. Yes, more than this, for the long list of tempting events includes a Ladies' Night, Club Dinner and a Winter Outing. Only those who have attempted the work can know how much is demanded of the various committees to make it possible for a club to get out such an inviting program and place it in the hands of their fellow members at a date so well in advance of the scheduled events. Not only is such a practice a convenience to the members themselves, but it can be made one of the most potent factors in inducing others to become members. Such a program would convince a possible member of the value of the society to him, where any amount of generalization on the advantages of membership would fail. Our Chicago friends are to be congratulated on their most complete and efficient organization.

The Elmira Camera Club

The Club held its regular annual meeting on the evening of January 5, 1905, and after the regular business had been disposed of the election of the following officers for the coming year, took place: President, Maxwell Minier; Vice-president, W. H. Arnold, and Secretary, Harland T. Stagg. The Board of Directors will consist of W. J. Wetmore, C. F. Bromley, and W. H. Arnold. The election over, several most interesting papers were read, affording much interest to the members present. These were followed by an informal discussion of various plans by which the work for the coming year could

be made even more effective than in the past. While the Club has been most successful during the previous year it desires to make itself more and more a factor in the field which it occupies. Refreshments were served during the evening and the meeting was voted one of the most enjoyable in the history of the Club.

Fargo Camera Club

The Fargo Camera Club is a comparatively young club, but has an enthusiastic membership. The Club consists of about twenty active members and has done some very good work since being organized. It is the first camera club to be organized in the State of North Dakota. At the last meeting the Club held a competition, interiors on Kruxo paper being the subject selected. J. A. Van Kleeck, President of the Club won first, and Miss May Stanford, second prize. The Club is making efforts to establish a photographic library and has succeeded very well in the short time it has been at work. There have been many very valuable books donated, as well as subscriptions to some of the leading magazines. The subject for the next contest will be snow-scenes, and will take place February 6th. The Club meets the first and third Mondays of each month.

Brooklyn Camera Club

The Print Committee of the Brooklyn Camera Club announces the following jury of selections for their forthcoming Competition and Exhibition to be held at their rooms on February 16, 17, 18, 1905: Rudolf Eickemeyer, Fred W. Kost (painter), and Curtis Bell. The Club is to be congratulated on securing these well-known men to serve as jurors, and we have no doubt concerning the universal satisfaction that their selections will give.

A. F. of P. S. Notice

The American Federation of Photographic Societies desires to announce the following competition, open to members of all organizations which belong to the Federation or which may join before the closing date, as announced below:

LANTERN SLIDES

For the best set of not less than six lantern slides, \$100 in gold and the Federation gold medal. To every other competitor whose slides are selected for the 1905 Federation International Set of one hundred slides, a silver medal. To be judged worthy a place in this set will be recognized as the highest honor obtainable by makers of slides. Points of judging as follows: pictorial quality, fifty per cent; technique, thirty-five per cent; interest, fifteen per cent. Competition closes October 1st, 1905.

W. H. Moss, Chairman,
Lantern Slide Committee.

C. C. C. Illustrated Lectures

The 177th Illustrated Lecture of the California Camera Club was held at the Alhambra Theater on Friday evening, the 17th, and as usual this large building was filled. The subject, "The Ruins and Antiquities of Old Mexico," was well presented by Mrs. Frona-Waite Coburn, who has traveled through Mexico several times and is entirely familiar with the entire country. It was through Mrs. Coburn's efforts that the Camera Club secured the room in the San Francisco Building at the St. Louis Fair.

It is expected within a very short time to give the Annual Pay Exhibition. The subject has not yet been decided, but James W. Erwin will undoubtedly deliver the lecture.

Elmira Camera Club Demonstration

Recently the members of the Elmira Camera Club enjoyed a very interesting and instructive demonstration of the new sepia toner for Velox paper. The demonstration was given by L. W. Brown, a representative of the Eastman Company. On Sunday, January 22nd, Mr. Brown gave the members some valuable pointers on home portraiture using the Steadman system of timing exposures. Several portraits were made, all being very successful.

The C. C. C. Cooper-Hewitt Light

The following letter has been received by the Corresponding Secretary of the California Camera Club, from F. H. Mann, of the Capitol Camera Club, Washington, D. C.:

"I read in CAMERA CRAFT that the California Camera Club has installed a Cooper-Hewitt light. As some of our members are seriously considering the advisability of putting in a light I would ask a favor of you. Will you kindly inform me whether or not you find the light satisfactory? Is the operating of same very expensive? What are your rules for controlling the use of it by the members, being an extra expense for electric current when running; also the liability of breakage. Do you charge a fee for using the light? Any information that you can give me on the above lines will be appreciated."

Mr. Mann, no doubt, would be pleased to hear from any Clubs using the above light, and a letter addressed to him at Room 89, Navy Department, Washington, will reach him. Our own light works most satisfactorily; it being less expensive than the arc light heretofore employed, no charge is made. As formerly, members are limited to hour-and-a-half periods. Mr. Mann has been written to.

A Letter to the Editor of Camera Craft

DEAR SIR: The attitude of the Photo-Secession toward the First American Salon at New York has excited much adverse criticism and it is to be presumed that the subject is of sufficient interest to warrant setting forth some of the reasons why the Photo-Secession took the stand it did and the ultimate justification of its course.

I feel that I can accomplish two ends in addressing this letter to the photographic

press of America and Great Britain: the first in advising photographers of the deception that has been practised against them, and the second in giving the photographic magazines an opportunity to prove their repeated assurances that they stand only for that which is fair and honorable, and I can only feel that those publications refusing to give space to this letter stand convicted of a selfish interest and sacrifice all right

to contend that they stand for the advancement of photography.

You will remember that Alfred Stieglitz, Director of the Photo-Secession, issued a letter to the press, appearing in the August number of most of the American magazines, in which he announced that the Salon in New York, "will be of such a type or character that neither I nor the Photo-Secession can have any connection with it or be represented therein." As a result of this announcement there came a storm of denunciation that included everything from the Photo-Secession and Mr. Stieglitz to the grammar and diction of the letter and the supposed prophetic inclinations of its writer.

The fact that the management of the First American Salon at New York had, from the first, associated itself with influences opposed to the Photo-Secession, such opposition being due to circumstances that have no bearing on the point in question: that while every photographic interest but one, in this country and Europe, was being propitiated by the Committee, every opportunity to sneer at and to condemn privately and publicly the Photo-Secession, was taken advantage of, would surely have justified the Photo-Secession in deciding to have nothing to do with the Salon, and in even publicly announcing the decision with considerably more force than was done, yet these were not the reasons why it was decided to hold aloof from the exhibition.

It had come to our knowledge and in such a decided way that it could not be gainsaid, that the management of the Salon was not pursuing a course calculated to guarantee that fairness and freedom from prejudice necessary to the holding of an exhibition of photographs that would be of any value to the advancement of pictorial photography. We learned that the Europeans had been told their exhibits would be *hors de concours*, in spite of the assurance that all prints must pass the Jury, an assurance vaunted with an insistence that was from the very first an insinuation against the Photo-Secession. It was felt that there was a lack of sincerity, a lack of purpose and a lack of ability that boded ill for photography, and as the Photo-Secession stands, not for the Photo-Secession, not for Stieglitz, not for its Fellows, nor yet for its Associates, but for PHOTOGRAPHY, the decision was against the Salon.

When we learned that the letters Mr. Hartmann sent to the Europeans inviting

them to send exhibits *hors de concours* were written and mailed under the direction of the Metropolitan Camera Club, Mr. Hartmann simply signing the letters at the Club in the presence of Roland Rood, when Curtis Bell, President of the Salon, told Mr. Rood, who was representing the *American Amateur Photographer*, that he and another would select certain prints to be submitted to the Jury, when we saw the catalogue and noted the suspicious abundance of names previously known through minor exhibitions and competitions and when we saw the Salon itself, we felt we were justified in the stand we took.

But not so the photographers at large and the general public. Mr. Bell repudiated Hartmann and his letters. Mr. Bell wrote to Mr. Rood that the plan he had mentioned had been changed and all prints would go before the Jury. The minor photographers were lauded by the critics as the true pictorialists and the Salon was hailed as the exemplification of photographic art, the raising of photography from the slough of despond, the dawning of a new era! And the photographers at large and the public believed!

Now Frederick W. Kost, A.N.A., a member of the Jury who was of the few that served and who got the Jury together for the Salon says that he informed Curtis Bell, President of the First American Salon at New York, that it would be impossible for the Jury to look over so many pictures, and Mr. Bell selected the number the Jury passed upon, which did not exceed eighteen hundred (1800) prints! Think of it! Seven thousand two hundred prints passed upon by Curtis Bell and eighteen hundred by the Jury of Artists! Yet I have before me a letter written by Curtis Bell, under date of November 24th, in which he says: "Every frame entered was submitted to the Jury," and he underscores the word "every"!

Does the Photo-Secession need any further justification of its attitude? No! Not even the furthest statement of F. W. Kost, member of the Jury, that the Jury did not consider any of the photographs "works of art," and that they were all surprised to find so much ignorance of all art principles so generally displayed.

I will refrain from comment on the position of the management of the Salon.

Yours truly,

HARRY C. RUBINCAM.



Notes and Comment



California College of Photography News

The new Enlarging Department has just been completed, being fitted for use with both day and artificial light. Three Goerz lenses are now in use. It is necessary to keep the department running all the time in order to accommodate the students interested. Among the demonstrators visiting the College the past month were Sam Oswald, with Willis & Clements; R. J. Peterson, with the American Aristotype Company, and F. D. Burleigh, with the Eastman Kodak Company. We are pleased to have the demonstrators with us; they enliven the college life, as well as impart new ideas that they have picked up from the various studios throughout the country; thus broadening the students' knowledge and keeping them from falling into a rut.

One of the first of our number to enter the matrimonial state is Miss Lydia E. Kingery, of Cayucos, California, student of 1904, who was married to F. G. Maus, of San Francisco, on the twenty-first of January.

Miss Maude E. Baldwin of Klamath Falls, Oregon; Dr. R. Stewart of Quincy, E. G. Davis of Black Diamond, C. T. Hill of San Francisco, M. Okadaira of Kirin Gumma, Japan, and Mrs. Kate W. Drake of Chicago, Illinois, are the latest to enroll.

Professor S. E. Goodall, of San Francisco, has just taken charge of the Department of Operating. The work for this month is along the lines of modeling; teaching a student to see light and shadow, as well as training him to select the best features of the subject's face and then emphasizing these good features in the portrait.

The Text-book and Correspondence division of instruction has been working to its full capacity. This Department is a strong feature of the College; the correspondent student receiving instruction from the men who have charge of the college laboratories; men who learn from day to day the exact requirements of the student. New correspondence courses

are being installed as rapidly as the printers can turn out the instruction books, and it has been necessary for them to run day and night in order to keep up with the demand. The last course prepared is one in Commercial Photography, one which starts the amateur at the very beginning and carries him along, step by step, training him to make work that he can sell.

The Sales Department is the latest addition to the College. Its object is to receive the students' work and find a sale for it among manufacturers and advertisers who want good, up-to-date photographs for illustrating and advertising purposes. The Department is supported by the College, and all money received for pictures is turned over to the student. Some pictures sell as high as \$30.00 apiece, depending upon their value as a "business-bringer." The Commercial Course gives full instruction as to how to make this class of work.

Will B. Hunt, one of our students, has purchased the George L. Wilcox studio at the corner of Sutter and Jones Streets, San Francisco. He is meeting with the best of success. As he is a first-class workman we predict for him an excellent business.

President A. S. Dudley and Professor S. E. Goodall attended the regular monthly meeting of the State Association of Photographers held Tuesday the seventh of last month, in San Francisco.

The student life constantly enjoys many added pleasures in the form of operas, lectures, plays, debates and the like, in the Assembly Hall. There is never a week goes by without something of value making its appearance. Among the recent good things was the celebrated Creator and his Band, on February 6th. On February 8th the Intercollegiate Debate between Stanford and California Universities was held; the hall was filled to its full capacity—seating over four thousand people—and the rooters from both sides made things very lively.

The First Annual Souvenir issued by the College came from the press the first part

of the month. It is full of good things. The articles are of practical value to every amateur and professional. One strong feature is the review of the "Latest in Photographic Apparatus," by President Dudley, covering as it does the material that has been placed upon the market within the last year. It should be read by all interested in working with up-to-date apparatus. "Don't Do It," by Fayette J. Clute, Editor of *CAMERA CRAFT*, "Proofs," by E. J. McCullagh, "Self-Movement," by Dr. C. G. Baldwin, "\$600 in Prizes," "Why Attend a Photographic School?" and "Why I Went to California," by C. J. Morgan, are among the many other good things. If you did not secure a copy you can have one mailed to you by sending ten cents to the Publication Department, California College of Photography, Palo Alto, California.

Mr. Frank L. O'Neal, who was with us until February 1st, has secured an excellent position with Messrs. Turrell & Miller of San Francisco.

A Commendable Photographic Department

Our interesting contemporary, the *Western World*, of Denver, started its fourth volume with the December issue, which, in addition to its usual assortment of good reading matter, contains the first installment of a Photographic Department. This feature is in charge of George L. Beam, one of the best known and most skilful amateurs in the West. The *Western World* has been made the official organ of the Denver Photographic Society, of which Mr. Beam is an officer. Several fine full-page and smaller reproductions of artistic photographs by local workers are reproduced in most excellent style. The reading matter contained in the Department is not only thoroughly timely as to doings in the photographic world, but the element of instructiveness is well in evidence. *Western World* is to be congratulated on having secured so competent an addition to its editorial staff and the photographers of the West are even more fortunate in their acquisition of such a creditable exponent of their claims to recognition as a body of enthusiastic workers. A request addressed to the Western World Company, Denver, Colorado, will, I believe, bring a sample copy of the magazine.

Joaquin Miller's Funeral Pyre

"Joaquin" Miller, the famous "Poet of the Sierras," is known far and wide for his many eccentricities. Among many other things, he is a strong believer in cremation—after the ancient manner of the Romans and the devotees of Brahma. When he shall have passed away, the "good, gray poet" desires that his body shall be cremated, and that his ashes be "inurned," and carefully preserved. To this end he has caused to be erected on the crest of "The Heights," overlooking the cities of Oakland, Berkeley, and Alameda, and the great bay of San Francisco, a stone mortuary altar.

On top of this pyre is a deep depression in the solid masonry—quite large enough to contain a human body. After death Miller's remains will be placed in this receptacle, covered with fuel and consumed—after the open-air style of cremating in India. Though odd, yet it is the unique fancy of the erratic old bard. With his own aged hands the poet helped to construct this funeral pyre, on which his body is finally to be reduced to ashes.

Along the winding ridge of "The Heights" Miller has also caused to be erected several large stone memorial towers, that are very conspicuous. One is a pile of square masonry, dedicated to Col. John C. Fremont, the famous "pathfinder"; another to the poet Browning, of whom Joaquin is a great admirer, and a third (of pyramidal shape), which the old poet facetiously calls "Moses' Grave." Many hundreds visit the poet to pay their respect to him. Few call who do not ascend "The Heights" to take a look at these rugged stone memorials.—*From the Pacific Monthly for January.*

A Large Lens

One of the largest photographic lenses in existence is that purchased recently for the Cape Astronomical Observatory in South Africa. The smaller Cooke lenses are of course well known in America for ordinary photographic purposes, but this giant has an aperture of about ten inches in diameter. The total weight of the lens with its mounting and cameras is over six thousand pounds, one hundred pounds being the weight of the glasses. This large Cooke lens forms microscopically sharp images of the stars throughout a negative fifteen inches square, the exposure being about two hours for each plate.

The Focusing Magnifier

The Taylor, Taylor and Hobson people are sending out a little illustrated list of spirit levels, but not the least interesting photographic help that is listed is their Focusing Magnifier. It slides together like a miniature telescope for convenience in carrying, has a screw adjustment so that it can be adjusted to the eyesight of the user, in fact, it is as well made and perfect as the celebrated Cooke lenses turned out by the same firm. With it, the most perfect focus can be easily secured. By cementing a microscopic cover glass to the inner side of the focusing screen with a drop of Canada balsam and applying the magnifier to the spot of clear glass so produced, the focusing of the image in night-work and flash-light interiors becomes as simple a matter as when brilliantly lit views are before the camera. Without the expediency of the cover glass, wonderful improvement in the illumination of the image is secured and the saving of plates and avoidance of disappointment when working in a dull light will repay one a hundred-fold for the small outlay required to secure one of these conveniences.

An Interesting Decision

There are a number of mercantile houses in the United States, whose products, owing to high quality, are always sold at a standard price, and the mere fact that any such products, other than second-hand or shop-worn, should be offered for sale below this price, ought at once to excite suspicion in the mind of the purchaser. An interesting instance of this came to light recently in the suit of F. G. Anthony, of New Haven, Connecticut, vs. The Folmer & Schwing Manufacturing Company of New York, in the Municipal Court of New York City. The Folmer & Schwing Company are manufacturers of very high-grade photographic apparatus, and all their products have a fixed price to the consumer. Some months ago Mr. Anthony negotiated for the purchase of one of their cameras through Henry C. Close, an employee of the defendant Company. The negotiations were carried out in the sales-rooms of the Company in New York, Close agreeing to make Mr. Anthony a special price for the outfit. The deal being concluded, Mr. Anthony returned home, and when notified that the outfit was ready for delivery, mailed his check for the amount, made out to H. C. Close, the employee of the Com-

pany, instead of the Company. A little later Close fled to Mexico, where he is now, imprisoned, pending international extradition proceedings, it coming to light that he had been dishonest in a number of instances. About this time Mr. Anthony sent his camera to the defendant Company for some slight repairs. Upon examination of the serial number on the camera it was found that the instrument had never been sold by the Company, and they retained it as their property. The camera not being returned to Mr. Anthony, he brought suit to recover its value. The testimony in the case proved that the defendant Company had not sold the camera, and that the title did not pass from them. The request of Close that the check be made payable to him should have aroused the suspicion of Mr. Anthony, but as it did not, he lost the case. The decision in this case proves conclusively that one cannot be too careful, when offered special concessions that are not warranted, or are unusual in a regular legitimate transaction.

A Remarkable Panoramic Picture

We received recently from the Rochester Panoramic Camera Company a panoramic group picture taken at St. Louis last October, on the occasion of the meeting of the Photographers' Association of America. The picture was made with their Cirkut Camera No. 10, using a single rectigraphic lens of seventeen inches focus. The picture is fifty by ten, and a fine piece of work despite the adverse conditions under which it was taken. These cameras will be on the market in a variety of sizes at an early date, and they should receive the attention their good qualities demand from those interested in this class of work.

Some Fine Photographs

So many requests for the interesting photographs reproduced by the Bausch & Lomb Optical Company, Rochester, New York, in their Semi-centennial Souvenir and photographic catalogues have been received, that the Company has had prepared a series of prints which will now be supplied to inquirers at the nominal cost of ten cents each to cover cost of print and mailing. As these prints are not only beautiful examples of lens work, but interesting pictures as well, many of our readers will no doubt avail themselves of this opportunity to obtain some "simon pure" samples of good photography.

CAMERA CRAFT



San Francisco, California

F. I. MONSON PHOTO.

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CALIFORNIA



Portrait of Miss Gertrude Boyle
By Adelaide Hanscom



VOL. X

SAN FRANCISCO, CALIFORNIA, APRIL, 1905

No. 4

My Flashlight Studio

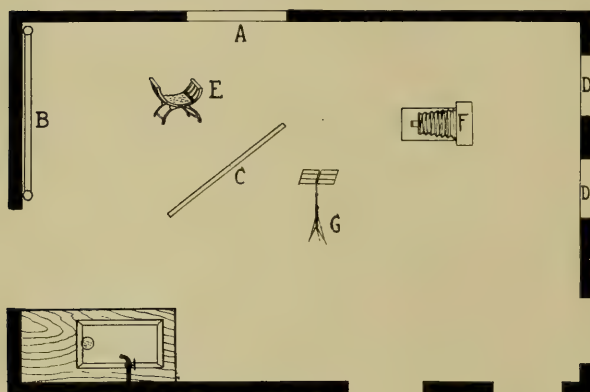
By BERNARD C. ROLOFF

A flashlight studio must be a queer arrangement, you muse, as you read the title. Well, it is a little different from the usual thing, and you will feel inclined to think that it is a little *better* than the usual thing, as you read along. When I desire to make a portrait of a visitor it is not necessary to rip up the house as heretofore to produce the difficult effect of lighting I desire. I have made my studio almost automatic, so to say. The position that the sitter is to occupy and the different light effects which may be secured are all predetermined. Even the position the camera is to occupy in the various exposures is marked so that there is hardly any necessity for focusing. All that is necessary is to decide upon a suitable room for your use and then to adapt it to your needs, and very few fittings, requiring but a small outlay of cash, are needed. The chances are that you already have a "truck" room for your own use if you have been engaged in amateur work for any length of time. If not, select a room that is used but little in your home, and even the kitchen will do at a pinch. If neither of these is available, it is a simple matter to repair to the garret or basement, and in a very short time you can transform either of these places into a flashlight studio, and you have the advantage of having a large, roomy apartment to work in. In order to explain the matter lucidly I will describe my own arrangement, and those who desire to try the experiment can easily adapt these ideas to their own particular needs.

The studio is arranged as follows:

The accompanying diagram represents the only room I have at my disposal, a finished summer kitchen in the basement of the house, in size about ten by sixteen feet. The room contains a sink, and has three doors and three windows, one of the latter (A) being about five and a half feet from the floor. The room itself is only a trifle over seven and one-half feet in height, which is somewhat of a drawback for flash-work, but as I do not attempt large group work, it serves my purpose very well, as I can place my flash from two to three feet higher than the sitter's head, although, if possible, I would advocate placing the flash at least four

feet higher. I have fitted up the room, as shown in the photograph, with a background at (B, shown in the sketch) a diffusing screen (c) hung from the ceiling, which will be presently described, and carpet paper tacked to the floor, the chair being borrowed from the library for the time being. The window A is sometimes used as a source of illumination, but more often as a reflector or an offset for the strong flash from the opposite side of the sitter. This window, as well as windows D D, is provided with a shade which may be drawn if desired to shut out all daylight. These shades were made at home from a piece of post-office cloth, bought at a stock-house, and shade-rollers and hung at the bottom of the windows. Good shades may now be purchased at one of the many five and ten-cent stores in all large cities, but I prefer the post-office cloth, as I do my printing in this same room and the yellow light is an advantage in working developing papers. Diffusing screen c, shown in the photograph, is hung at the points indicated on the diagram from screw-hooks in the ceiling, and at several other places I have provided similar hooks to admit of changing the position of the screen with relation to the

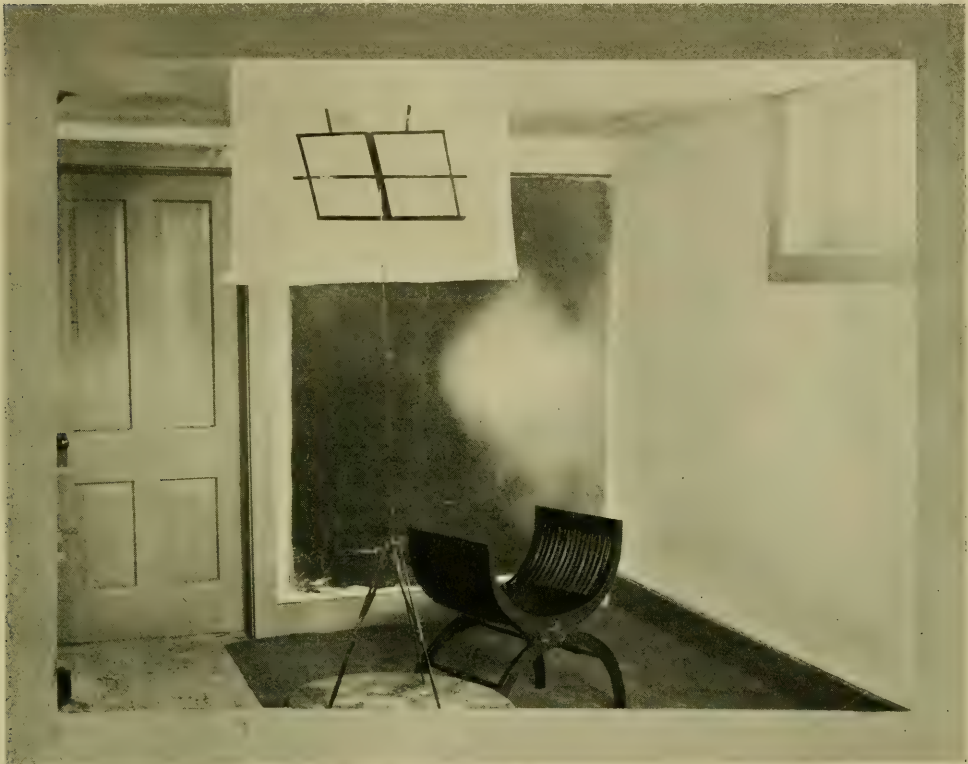


flashlamp. The exact position is not material, inasmuch as it is only necessary to hang it between the sitter and the lamp. The diffusing screen is so arranged that it can be let down from the ceiling and rolled up and drawn up again out of the way. Means for doing this will readily suggest themselves to the amateur. I have little need for a reflector in my room, as the walls are

unfinished and reflect sufficient light, but it is well to have one which may be hung in a manner similar to the diffusing screen. I prefer to have the reflector made of sheeting about as wide again as an ordinary window shade. My background is hung on a rod about two inches square, the rod being hung from brackets on the back wall, and the background shown in the photograph tacked to the front face of the rod. Each of the other three faces of the square rod has a background of different color or material tacked to it, this detail being of some advantage when it comes to changing backgrounds. If your room be arranged so that it is possible and convenient to do so, I would advise placing a shelf on one of the side walls a few feet in front of the sitter, upon which to place one of the flash-lamps for certain effects. This is of some advantage when it becomes necessary or it is desirable to use *two* lamps. At (E) just three and one-half feet from the background (B) I have placed four tacks (brass-headed), driven well into the floor to mark the position of the chair I use. In the diagram the camera is shown at (F) sixty-six inches from the sitter. The flash-lamp (G) is shown three feet six inches to one side, and thirty-six inches in front of the sitter. With the room arranged in this order, the portrait result would be what might be termed "broad" lighting.

I intend to work out a number of different effects of lighting and utilize a certain form of marking with tacks on the floor to indicate the various distances,

and make an index, as it might be termed, to enable me to tell at a glance what the various markings indicate, and probably this might be illustrated with prints showing examples of the various effects secured with the apparatus at certain distances, as an aid in securing the correct pose and positions. In order to move the camera about without the trouble of continually adjusting the tripod, I have made a frame in the shape of a triangle into which the three legs of the tripod fit. This frame need hardly be described in detail, as it is easily made by nailing three three-inch boards together, being careful to get the triangle true, making slight holes at the corners for the ends of the tripod legs and providing the frame with three casters, one at each corner, so that it may be easily moved about. Now take



a piece of strong cord and tie it to the tripod screw underneath the camera, and to the other end tie a plumb bob or other weight, this being for the purpose of properly locating the camera over the tack marks on the floor. It is also well to place marks in the tripod legs to indicate the extent of drawing out the tripod, so that it can be placed in the same position as regards height from the floor when it is to be used again for a similar lighting. At this stage it might be well to explain that a few experiments will show that the height of the camera with relation to the subject is of some importance, as entirely different results may be obtained by varying such height.

It must be understood that it is possible to secure numerous variations of lighting by departing from the measurements given, but they are given as a hint to work out other styles of lighting for yourself or by reference to such works as



Photo Miniature on Flashlight, which gives diagrams, by the help of which the veriest tyro has a chance to secure a good result.

Now as to flash-lamps: To secure the best results it is not at all necessary to buy an expensive flash-lamp, as the contents of the cartridge or bottle can be poured across the bottom of a pie-tin in one straight unbroken line, but a flash-pan of some sort is better. It is advisable for you to purchase a cheap japanned music-stand (like the one in the photograph) which will admit of some lengthening. I bought a japanned music-stand for thirty-five cents and used the upper portion, viz: the trough or piece of metal on which the music rests to strew my powder on, and it is just the thing, as I can raise it eight or nine feet from the ground by placing it on a small table or chair. To use this apparatus it is only necessary to strew the powder the length of the trough and insert a fuse near one end so as to overlap. It is preferable, however, to set off the powder by means of an electric spark. My own apparatus is arranged in this manner, and the construction of an electric flash-lamp along these lines is very simple, but lack of space forbids a detailed description of it at this time. Suffice it to say that three plunge batteries furnish the current which passes through a primary coil, and the terminals are brought to binding posts fitted to about the center of the trough. From there two fine wires lead close to the bottom of the trough, where they almost meet. When it is desired to set off the flash a piece of gun-cotton is placed on or between the two fine wires, flash-powder strewed along the trough and in contact with the gun-cotton, and the flash set off by pressing a push-button which is included in the line. Thus I can get babies, or rather young children, who have had their pictures taken by flashlight so often that they raise their hands to shield their eyes every time a match is struck preparatory to setting off the flash.

This method and arrangement is especially valuable to those who, like myself, are prevented by their daily labor from being at home during the bright hours of the day, preventing their doing daylight portrait work. Most amateurs are the recipients of numerous requests from their visitors and friends for a portrait, and quite a little extra money could be earned by an ambitious amateur following this up, especially as this method requires so little preparation before making the exposure, thus insuring a better expression than if the (im) "patient" were obliged to sit for twenty minutes and be experimented upon.

Art

To enable one to translate the crude facts of life in a suitable manner there must be an atmosphere of mental refinement. The untrained eye sees that a man is a man, and perhaps that a face is a face, but it does not discern the shadows or lights upon form or features. Cultivate it to some degree of artistic power and it will see shadows distinctly, but only the more vigorous of them. Train it still further, and light within light and shadow within shadow will be seen, until at last it will find delight in gradations imperceptible to the untrained eye. These gradations, then, must be sought for carefully, as they are the last parted with as the objects retire into distance.—A. ASHLEIGH SNOW.

Make Your Dark Room Comfortable

By NEWTON E. ARNOLD

If you asked a carpenter or a cabinet-maker to go into a stuffy, ill-smelling, poorly ventilated room and produce a piece of work, would you expect that the results would equal or even approach what he would turn out in his own workroom? You could not expect the same good workmanship and would have little cause for complaint. Granting the man ordinary skill and the pride all good workmen feel in their work, you will find his own little shop well lighted, well ventilated and orderly. True, it may present an untidy appearance to an eye not educated to the utilities of that particular craft, but the order is there.

There is no denying the fact that conditions existing in the dark room have much to do in governing the quality of the work turned out. We may provide ourselves with the best material in the way of plates and chemicals, but these are less important than the matter of allowing ourselves a comfortable and convenient dark room in which to perform the most important part of our manipulation. I do not intend to advocate the construction of an elaborate and complete dark room, because this is out of the question in a great majority of cases, but the average amateur, once he is made to realize the handicap his present plan places upon his photographic productions, can do much to minimize this disadvantage.

Sifting the matter right down to the actual requirements there are no insurmountable difficulties in the arrangement of a room that is all that one can require. The only conditions demanded are not at all dependent upon a full purse. Elbow room, plenty of safe light, good ventilation and some arrangement whereby the temperature can be kept uniformly comfortable. Running water is a convenience, but not always obtainable. It is perhaps the least important of the requisites named. Securing the first, ample room, the rest becomes but a matter of arrangement and the exercise of a little ingenuity. Admitting that the outlay of a few dollars is made necessary by the change from the present unsatisfactory plan you may be following, will not the greater percentage of creditable pictures, the added satisfaction and the decrease in wasted material soon overbalance this expenditure?

In looking around him with an eye appreciative of the possibilities one will be surprised at the number of available places for the construction of a dark room of ample proportions. One of my acquaintances secured permission to use a portion of the second floor of a neighboring stable, the owner at the time using it for little more than a store-room, as no horses were kept. Another found that the expenditure of a couple of dollars for roofing-paper allowed him to make a most convenient room at one end of a back porch; in fact, the powers that reigned in that part of the establishment welcomed his offer to provide them with a house for storing unsightly laundry appliances. This was done by partitioning off one part of the room, and in doing this my friend so planned that a double entrance was provided in such a way that no doors were required to shut out the light. A third beginner found that a carpenter could throw a partition frame across the entire end of a room for a surprisingly small sum, and do it without driving a nail into the walls or ceiling except at two points where no damage could be done. This framework was covered with building-paper, and on that wall-covering was



POPOCATEPETL FROM AMECA, MEXICO
by W. J. PIATT

laid to match the rest of the room, and all was as neat as before. Still another, at my suggestion, found that a small roll of this same building-paper would allow him to render a small carriage shed perfectly light tight. True, the small, light dog-cart had to be removed each time before operations of a photographic nature were begun and again returned when work was finished, but this required only the expenditure of a few seconds of time. I have simply mentioned these examples to show what can be done. Attics and basements are often at our disposal, and a few inquiries of a carpenter as to the cost of light framing and the desired amount of building or roofing-paper will surprise one as to the possibilities in this direction.

The matter of ventilation is one that is easily disposed of if it be but understood that the warmer and most impure air rises, while the fresh air must be introduced near the floor. Fresh air can not be admitted, even at the lower part of the room, without first arranging for the escape of the impure air at the top. This securing of ingress and egress of air is simply a matter of a trapped opening. Small soap or starch-boxes can be easily converted to this end. A piece is removed from the top of both ends, a partition inserted in the middle so as to almost reach the bottom, and one has then but to nail on the lid and bring one of the openings up against a like one in the wall. One of these trapped outlets should be placed near the top and the other near the floor of the room. One of my dark-room builders secured good ventilation in even a more simple manner. The building-paper was not allowed to come quite to the top on one side of the room. A couple of inches in front of this unprotected space was hung a strip of the paper, fastened to the ceiling, one on each side. At the bottom the same trap effect was secured by the aid of a piece of board and other strips of the paper.

The light should be on the outside of the room if possible, but failing this the box containing it should be well ventilated, preferably with a pipe leading to or near the outlet trap. The passing out of the warm air caused by combustion will assist in creating a draft that will materially help ventilation. To secure all the safe light possible I would recommend as large an illuminating surface as possible. It is not the amount of light, but its actinic intensity that causes danger. A light four inches square is no safer than one as many feet in size. My own lantern is a box glazed with a piece of glass about 12x16 that was sent me by the plate makers. It gives a most pleasing light, and being the same as is used in the factory, I am assured the greatest safety with the largest amount of light. I believe they charged me sixty cents each for the two sheets ordered, and I also paid the dealer with whose supply of plates they were shipped a few cents extra as my proportional part of the freight. The glass is of a special make and imported, and for that reason costs more than the ordinary "flashed" ruby article.

The cooling of the room in summer needs but little comment. If well ventilated, as advised, it will certainly be as cool as any room in the house. Making it warm in winter is not a difficult proposition. Assuming a room of convenient size and well ventilated, the introduction of a gas or oil-heater is not prohibitive. One worker I know uses an ordinary oil-heater which gives off quite an amount of light. This he renders non-objectionable by placing the stove behind a cheap folding screen that has been covered with ruby fabric. My own is a gas-heater which I bought with its applicability well in mind and then promptly fitted with this red mica that can be secured at all the stove stores. One of my friends has,



SUNDAY MORNING
by CURTIS BELL

for a few dollars, secured furnace connections; another simply had a sheet-iron drum built and connected with a nearby flue in such a way that it received much of the heat ordinarily passing out at the top of the chimney.

Running water is little more than a convenience when it is desired to complete all operations in the one room. My own dark room contained running water, but the first time I had trouble with the pipes I had them removed. I found it more desirable to do my washing of plates and films in another part of the house, and it is surprising how little water is really required for other purposes. An upright fixing bath is used, and this is carried bodily to the washing box in the kitchen sink, where the plates are removed and placed to wash. By doing this my dark room is at all times dry and fresh and the splash and drip nuisance is avoided; in fact, my own room is carpeted and contains hardly more than a work table, two small tables, which fold against the wall when not in use, and a couple of shelves. The usual advice to provide one's self with abundance of shelf room I believe is all wrong unless one proposes to do all his work, including printing, mounting and the like, in one room. As a rule, shelves are but an invitation to store them with all kinds of unnecessary material. Like the water proposition, a little experience and observation will prove to you that the chemicals and paraphernalia actually required in a dark room are very few. With a dry, roomy, well-ventilated, clean and comfortable dark room one can work in a satisfactory manner and can appreciate the full enjoyment of the most interesting part of photography. Figure the matter out, and I believe that even though the initial cost may seem rather a heavy outlay, you will find that the amount of pleasure and convenience gained costs but little relatively when the time during which it is enjoyed is considered. You will find what was before drudgery has become a delight, that where haste and unsatisfactory results went hand in hand, speed and satisfaction have replaced them. The same chemicals, the same plates and the same methods will seem more plastic in your hands, there will be less to regret and more for which self-congratulation will be excusable.



A BACKWATER OF THE RUSSIAN RIVER

BY HENRY W. GERRANS



MOTHER
by ANNIE W. BRIGMAN

An Enlarging Convenience

By HARRY L. SHEPHERD, B. SC.

The method generally used of pinning bromide paper in place while enlarging always proved a great bother to me, as in using heavy paper the pins required were very numerous—to make the paper lie flat—and had a bad habit of dropping out unless well driven in. Then removing them was another bother. The Kodak Push Pin was a big improvement, but they were also troublesome. I tried several schemes to overcome the difficulty, and the one given is my “finished product.”

My enlarging screen is a drawing-board (A) 30x24 inches, hinged to the end of a table (E) by the hinges D D. The plane of the screen is kept parallel to the plane of the negative from which the enlargement is being made (vertically), by fastening a strong cord near the top of the back of the drawing-board and tying the other end to a hook at the far end of the table, then bracing the board with a stout wooden brace caught in stops at the top of the drawing-board and the far end of the table top. A plumb line dropped down the face of the drawing-board will indicate when the face of the board is vertical. The cord will have to be tightened or loosened and one of the stops holding the brace caught in stops at the top of the drawing-board and the far end of the table top. A plumb line dropped down the face of the drawing-board will indicate when the face of the board is vertical. The cord will have to be tightened or loosened and one of the stops holding the brace caught in stops at the top of the drawing-board and the far end of the table top. A plumb line dropped down the face of the drawing-board will indicate when the face of the board is vertical. The cord will have to be tightened or loosened and one of the stops holding the brace caught in stops at the top of the drawing-board and the far end of the table top.

Look at Figure 1, A is the screen, B a sheet of glass, 18x20 inches, without flaws, underneath which a thin piece of white cardboard, of the same size as the glass, is glued to the screen. F F are brass springs from an old printing-frame, which, catching under the brads M M, hold the top of the glass in place. N N are wire nails serving as catches to hold the springs out of the way when the sheet of glass is being removed or placed on the screen. T T are one-quarter or three-eighths-inch bolts, shown in detail in Figure 2, and I think the sketch will fully explain their purpose. Figure 3 shows the manner of fastening the bromide paper C to the cardboard. Figure 2 shows a hinge, similar to those used in holding stamps in a stamp album. I buy a small box of

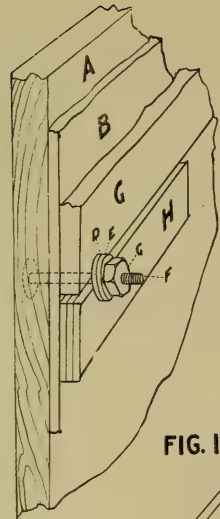


FIG. 1

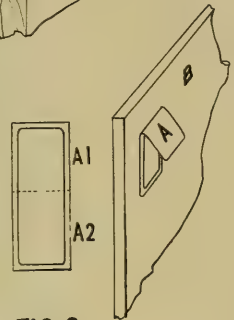


FIG. 2



FIG. 3

gummed stickers at a stationer's and make my hinges from them. I will now describe the operation gone through in using this help in enlarging.

Suppose the image as to size and location is projected on the screen. By two crosses mark the two upper corners. Take two hinges and stick the side *b* of each to the cardboard so that they will catch the bromide paper. Now, by ruby light, remove a sheet of bromide paper from its package, wet one finger and touch it to the side *a* of each hinge. Place the bromide paper in position, press it against the two hinges, which will catch and hold it in place, dust the surface with a flat camel's-hair brush, slack the nuts at *T T*, pull the iron and leather washers back, place the glass so that it rests on the two bolts, push it against the screen, catch the two top corners with the springs *F F*, then screw up the nuts till the leather washer presses firmly against the glass.

The bromide paper will be held absolutely flat, and you are free to do any kind of "dodging" without the fear of knocking out pins. In removing the bromide paper, slack the nuts, release the springs, allowing them to rest on the wire nails *N N*, remove the glass, then pull the bromide paper from the screen. One pair of hinges will last for five or six sheets of paper if you are careful to wet only part of the surface *a* each time.



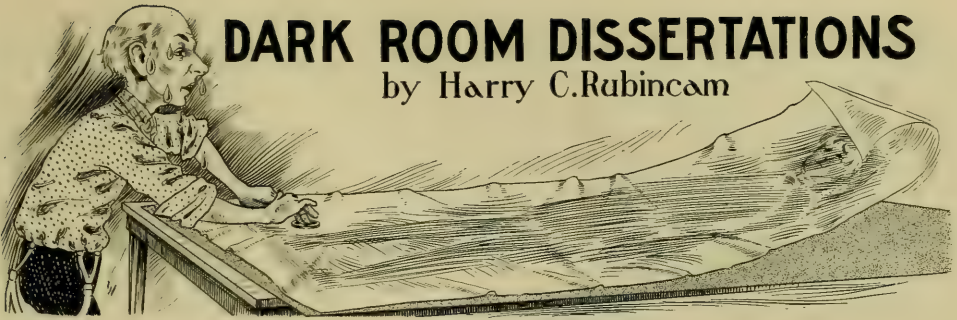
On Originality

Dallett Fuguet, writing in *Camera Notes*, says: It is a trite dictum of art that any one may take anything already done and do it over again and make it his own, provided he can do it better than it has been done before. If he succeeds, he is justified; and the verdict of time, which confers the permanent laurel wreath, will uphold him. But if he fails, he is doomed to oblivion, if not to ridicule, or even to obloquy. For he has dared to use the already minted gold of art, to deface the stamp upon it; yet has not given in place of this a sharper, clearer imprint. Nothing but this most difficult of all things, a decided bettering of the beauty already coined by art, can excuse any tampering with or borrowing from the creations of others. Anything less is mere imitation or downright theft.

But it is not necessary to keep refurbishing the old creations. There is ever material and combinations for it at our hands without this, if we are good enough to do anything of worth. The hacks keep dinging it into us that there is, and can be, nothing new under the sun. But everything keeps changing continually, as we do ourselves every moment. And the new raw material of our day and our generation lies ever ready if we can see clearly enough to seize it, if we have the knowledge and love of beauty sufficient to fashion it to art, and the strength of personality wherewith to stamp it. The doing of this is called originality.



ON HER GOOD BEHAVIOR
by ADELAIDE HANSCOM



DARK ROOM DISSERTATIONS

by Harry C. Rubincam

Imagine, dear reader, a hot sultry day in July, a coatless, hatless, breathless, perspiring amateur photographer with a batch of prints to mount, a table, some mounts, a pot of paste and a half-dollar. Ah yes, even a half-dollar, an equally divided "iron Louis." Now would you suppose that he intended to use the half's purchasing power wherewith to secure some ten soothing potions of Anheuser-Busch with which to assuage the difficulties of his sweating task, or does it occur to you that he will invest this sum of cash in an assistant who will shoulder the arduous phases of the task this hot sultry day? In any event, you are wrong. He is going to mount the prints with the coin! Now, perhaps, you have heard of the powers of the "Almighty Dollar," but did you ever suppose that a measly little old half-dollar could mount prints? Any kind of prints, too: 4x5, 5x7, or, if your imagination is good, anything up to a 14x70 panorama. Listen attentively, and I will tell you the secret. One James Thomson, the same I believe who has the happy faculty of being able to criticize reproductions of reproductions of pictures, found the thing out, and as he does not seem to care who knows it, I am passing it along. He favored *Western Camera Notes* with the opportunity of heralding this wonderful aid to a long-suffering and perspiringly exasperated army of print-mounters. The thing is headed: "A Wrinkle in Mounting," and I wish to call your attention to the "wrinkle"; there is some subtle suggestion in that word that seems strangely apt in referring to the half-dollar as a mounter, and its function is treated thusly: "With this or a similar coin the print can be quickly rubbed into contact in every part, much better in my humble opinion than is possible with the most expensive print roller. The abraded edges of the coin insure that every portion should be rendered in contact, and all superfluous paste pushed outward to the edges." Then James continues to explain that for four years all the print rollers that once held honored places in his family circle have been doomed to the seclusion and disuse that is ever a hard and hardening lot particularly to the vulcanized face of a print roller. We imagine from the reference to "abraded edges" that an old coin must be used. Not necessarily one of very ancient mintage, but nevertheless one that has been the rounds long enough and hard enough to have its freshness slightly marred, in other words, and perhaps to be unduly facetious, a regular "rolling stone" of a half-dollar. Ah! James, James, why hast thou been so bloomin' late in discovering this marvelous method? Think of the money invested in print rollers! Think of the machinery and capital and raw material tied up by manufacturers of print rollers! And now, James, with one fell swoop, you have put all this to the bad. Alas, alas! Will not some one come to the rescue with an article entitled, "How to make clothes-wringers out of abandoned print rollers?"



THE SNOW MANTLE

BY THOMAS A. MORGAN

As I look over the illustrations in the magazines of today and remember the bitter attacks formerly made upon anything bordering upon the "fuzzy" order, I am reminded of a peculiar phase of the modern romance of war times. You will remember that the hero discovers a spy. "Wretch, poltroon, carrion, sneak, snake, villian!" he cries, "what vile trait has led you to crawl into our lines disguised? Take that and that and that!" Then, after the spy is good and dead, the hero discovers that he wears his own uniform under his disguise, and hastily stripping the uniform from the corpse, he dons it himself, and going into the enemies' lines, does things that would make the most hardened criminal blush with shame. If you do not see the application, just hunt up some of those illustrations, and you will see abortions that make the wildest fancies of the once berated "fuzzyist" look as though he had used a two hundred and fifty-six stop.

I saw the greatest railroad system in the country tied up for a few minutes the other day by a Pocket Kodak. It happened this way: I was on a transcontinental train where there were several camerists. One passenger, who had been an interested listener, suddenly became possessed of the idea that the only thing in the world that he needed was a camera. Along toward evening we came to a station that was the end of a division and a short stop was to be made. "Now you run for the nearest telephone," I told him, "and get connected with some store that sells cameras. Tell them to send down to the train, C. O. D., a No. 3 Folding Pocket Kodak, latest model, and four rolls of films, twelve exposures each." He made



IN WINTER'S GRASP

BY THOMAS A. MORGAN

the connection, and gave the order. Then he got the exact amount, \$20.30, ready, and we waited for the goods. The minutes passed and no messenger appeared. The conductor stood on the platform and raised his hand for the signal to start, when the enthusiastic passenger headed him off. He explained the thing to him, and he agreed to wait. One, two, three, four, five minutes passed, and then we saw a boy coming down the street full tilt. He reached the train, the money was exchanged for the package, the conductor waved his hand, the engine groaned, and we were off again. And I'll bet the dealer could hardly think the thing was not a dream until he saw the \$20.30 coming back!

I have been severely criticized for saying that the photographic instructions published by some magazines are about as unreliable as anything could be, yet I now have before me two complaining letters in which the writers set forth the fact that three formulæ taken from prominent photographic magazines will not work out. One formula is a jumble of two others, one of those things worked up by some chap who has more time than anything else; the other is based on an absolute misstatement of fact, and the third is a chemical error evidently due to an uncertain knowledge of chemistry and a similarity of chemical terms. Now I am not going to express an opinion as to whether the dissemination of incorrect information is due to carelessness, ignorance or a regardless effort to fill space, but I think every reader who discovers a glaring chemical misstatement should call it to the attention of the magazine publishing it, and if these things persistently



BLEAK DECEMBER

BY THOMAS A. MORGAN

appear in the magazine, he should cease to be a reader. That is the way to get after them, my friend. The honest editors will be glad to know of the errors that creep in, and perhaps the others will try to keep them out in an effort to get your dollars.

A correspondent writes that he has recently acquired a Goerz Series III Double Anastigmat, and while he successfully operated a Rapid Rectilinear lens before, he can do nothing with the Anastigmat. He has asked several people about the use of the lens, and the most he has succeeded in learning is that one can do anything in photography with a Goerz lens. Is it any wonder he doubts this statement when they have all failed to tell him *how* to do it? That is what he wanted to know, *how* to make the lens do the work, not *what* it could do. It seems to have been principally the timing of exposures that bothered this man, and yet no one could explain to him that it worked at a given diaphragm, the time for his Anastigmat would be the same as for his R. R. If, therefore, he worked his R. R. at $f/8$ (or U. S. 4) the same time of exposure should give the same result at $f/8$ (or U. S. 4) on his Anastigmat. I am afraid he did not pay much attention to stops or diaphragms. Most users of R. R. lenses use them "wide open," and as the Anastigmat in question worked at $f/6.8$, it is not surprising that everything was over-exposed if he worked the same shutter speed he had used on his "wide open" R. R. on a "wide open" $f/6.8$ Anastigmat. The amateur purchasing a high-grade lens, after using a R. R., should thoroughly post himself on diaphragms and relative

shutter speeds, and it is most unfortunate that every photographer one meets is not able to give the desired information. Several text-books that are cheap contain details of lens construction and capacities, and every amateur should have one.

The Editor of a photographic magazine says that I should refrain from impugning the motives of magazines whose policies I do not agree with. I cannot refrain from doing it! Not that I am particularly keen for impugning motives because of a disbelief in policies, but because the individuals, motives, and the very policies themselves, are so tainted with an utter disregard of not only the welfare of photography, but of the most rudimentary elements of the principles of decency that I often long, with Jerome K. Jerome, for the good old days when you could go around and tell a man what you thought of him with a battle-ax. But as those days, alack and alas! are gone forever, I must content myself with an occasional hint at some of the tricks these editors will resort to.

And say, speaking of unreliability, did it ever occur to you that if editors of magazines are careless, ignorant, or dishonest enough to give space repeatedly to formulæ, wrinkles and dodges that do not work out, you are never sure that they are correctly reporting to you the various other phases of the photographic situation? Something to think over, that!

By the way, you have probably discovered, if you have read this far, that I am again at it and my hammer arm still strong. Several people have asked me why I don't stop being so critical and write nothing but funny stuff. Some day I will—when all the incompetent, the ignorant and the liars are dead! But as long as these three persist in taking an active part in photographic instruction, photographic politics and photographic journalism, just so long will I be standing around with a branding-iron, ready to throw and brand them every time they get within reach.



Some Pinhole Pictures

The three reproductions of snow scenes on the three preceding pages were made by Mr. Morgan, following the instructions given by Dr. Power in his article on the subject in a previous number of CAMERA CRAFT. The pinholes were made to conform to the sizes given in that article, namely, Nos. 1, 2, 3, 4, and 5, having a diameter respectively of one millimeter, three fourths, one half, and so on. The exposure is determined by multiplying the draw in inches by the number of the pinhole and considering the result as f value of the pinhole in minutes instead of seconds.

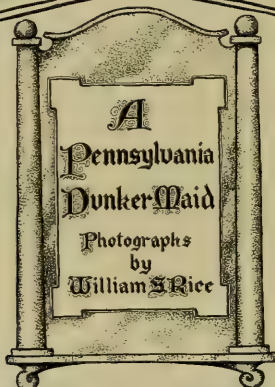
Mr. Morgan used a ten-inch draw and No. 4 pinhole, giving forty as the f value of the stop. An exposure meter gave four seconds as the time, using $f/40$, and hence four minutes exposure was given. Seed's 27X plates were used. The draw of bellows was in each case ten inches and the No. 4 pinhole used for all.



Polishing Pewter



Paring Fruit



A
Pennsylvania
Dunker Maid
Photographs
by
William S. Rice



Knitting Socks



At Meeting

Some Decorative Possibilities of Photographs

By WM. S. RICE.



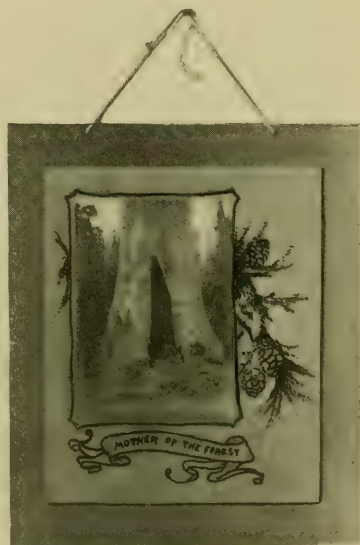
The average amateur accumulates during several seasons of summer outings a stock of negatives, among which quite frequently interesting subjects may be found. Mounting these in the manner in which the writer describes, like some that have been used for holiday or birthday gifts to friends, will enhance their beauty considerably, and they will serve as interesting reminders of days spent camping among fragrant pine and fir woods—days which are all too short for the nature-lover, and to whom a picture of a familiar scene, mounted artistically on a redwood panel with a bit, not too much, of pyrographic work, is a constant source of pleasure and inspiration.

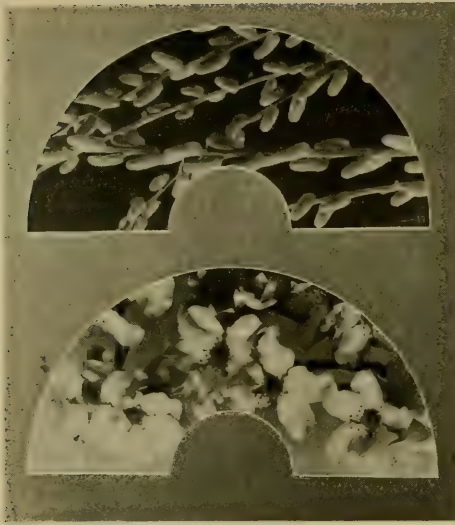
Ten by twelve-inch redwood panels, one-half inch thick, with a bevel one-half inch wide, left a fine surface for a five by seven sepia print of a still-life subject of peaches and wine. A decora-

tive frame for the picture was sketched in lead-pencil on the panel, and a space laid off below was enclosed with a decorative, ribbon-like scroll. In this space was lettered a little toast: "Here's health to my neighbors and happiness to all," and the whole design burned with a pyrographic outfit, as well as the bevel edge, which was scorched a deep brown with the flat side of the burning needle. Having a collection of a dozen still-life and fruit negatives, a number were utilized in this manner for gifts to friends for their dining-room walls.

My studies of California Big Trees and of Yosemite Valley, as well as Tahoe, were mounted on panels similar in construction, but with a branch of foliage and cones of the Sequoia gracefully burned about the picture, and a scroll contained the title of the picture in small letters. These were used to send to Eastern friends as souvenirs of the wonders of the Golden State. The panels are hung by means of heavy brown or gray silken cords, passed through two holes drilled through the top, about two inches from the corners.

I have in my collection several large-size (8x10) negatives of flower subjects, fruit blossoms and decorative grasses, and some time ago I conceived the idea of making prints from them on

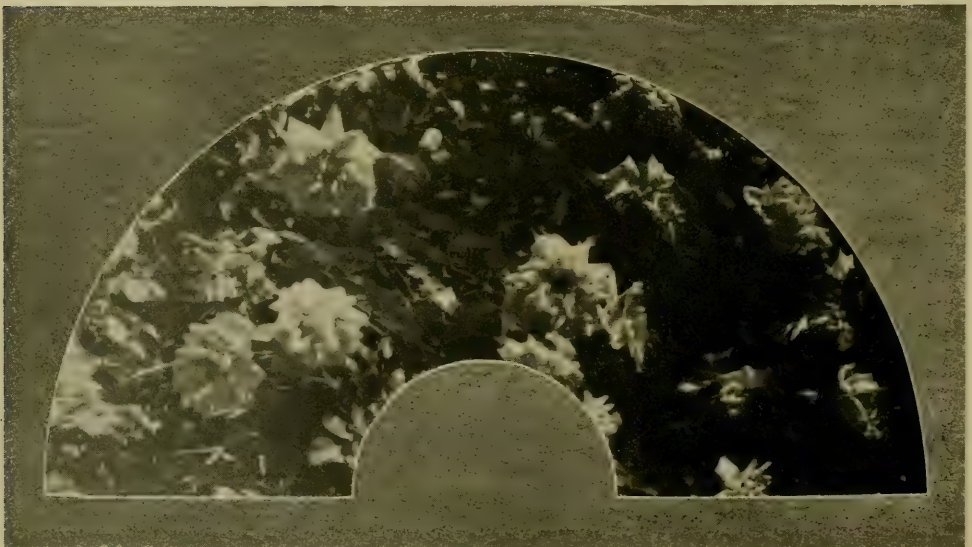




silk, using a blueprint powder put up in glass tubes for the purpose of sensitizing the material. When the prints on the silk were all finished and dry they were pressed flat with a hot iron and spread out upon cardboard and held down by means of pins. Taking a compass I drew a large circle, using as large a radius as the size of the print allowed. A smaller circle was drawn from the same center, using a much shorter radius. The picture was then trimmed on these lines. The result was a handsome fan-shaped mount. The silk fan mount was pasted onto another fan which had become soiled from constant use. Those who have enlarging cameras could use them

to good advantage and employ small negatives (4x5) for fan mounts; but in this method of procedure a different formula should be employed to sensitize the silk—a solution similar to that used for gaslight or bromide papers. Landscape subjects with a figure or two in the composition would be very suitable for this adaptation. Of course, it follows that for the fan-shaped picture the figures should be so located in the composition that they are well to one side to escape cutting for the space intended for the fan sticks to show.

The use of summer vacation negatives for souvenir postal cards is not a new idea; the writer had considerable fun last summer with negatives of camp life in the High Sierras. There was quite a large party of congenial friends enjoying their outing in the Tamarack woods near Lake Tahoe. We all knew each other pretty well and had many novel as well as humorous personal experiences while



in camp which aroused much joshing and numerous jokes and pranks. On my arrival at home, three weeks before the rest of the party returned, I printed a batch of postal cards, using as a subject for each the following: "The Largest Trout Caught in Camp" for the "man that couldn't ever get a bite." A spray of "Mariposa Lilies" for the "Botanist," "Photo of a Fisherman" for the "best one in camp," a "Tree Study" or landscape that happened to be this or that particular one's favorite, and a picture of the "Babies in Wading" for the juveniles. A humorous reminder in the way of a brief inscription relative to some personal josh in camp was written on each and the package mailed to camp. It is needless to say that much merriment ensued; and the cards proved to be pleasant reminders on their return home of the delightful weeks spent in close companionship with nature amid California's grandest mountain scenery.



LAURA

BY MRS. B. G. PEART



GRETCHEN
by CURTIS BELL

On the Representation of Movement by Art and by Photography

By JOHN BARTLETT

In the delineation of the forms of nature the human eye guided by the most delicate touch cannot approach the accuracy of the pencil of light, and photography has therefore led us, directly or indirectly, to a perception of many of nature's latent beauties and many of her appearances which the unassisted vision might not recognize as beauties but for the camera's searching glance; yet, from the tribunal of art, judgment must often be pronounced against photography, and the "book of law" is the conditions imposed by the limitation of our vision. Upon the physiological peculiarity of the eye, not to see nature as she actually exists, its optical imperfection, as compared with the lens of glass, depends much of our pleasure in pictures.

How often do we hear it said: "A photograph cannot lie"—but like Macbeth's witches it sometimes "lies like truth." A representation of nature, to be true artistically, must be true in relative values of light and shade as well as true in drawing, but in relative tone the photograph is frequently incorrect. The variety of shades of color in objects and the effects produced by reflection and interpenetration of colors are heightened or modified by persistence of vision, and as this impression cannot be reproduced upon the sensitive film, even with the employment of orthochromatic means, the photograph fails to reproduce what the trained eye of the painter sees and transfers to his canvas. Now, still further, it has frequently been demonstrated that the image impressed upon the retina remains there an appreciable space of time. It is not instantaneously formed and then instantaneously obliterated, but during its transit allows the superposition of other impressions. It is this peculiarity of vision which enables us to enjoy the so-called "living pictures" and other optical wonders.

To compel the painter to represent arrested motion, an actual momentary attitude, because he has the presentation of a single moment of time, would be as wise as to confine him to the use of those colors which do not modify each other harmoniously when in juxtaposition, though science proves the isolated existence of primary colors in the spectrum. Objects, though passing continuously through an unbroken series, seem to the eye to have no break in the succession, hence our impression of progression, but instantaneous photography (that is, photographic impressions of fractions of a second) by isolating any special movement in the series, really destroys all conception of motion. Therefore the reason why the painter of movement never seriously regarded the investigations of Muybridge and others who showed the actual truth of nature.

We do find frequent examples in the history of art conformable to the scientific demonstrations; but from the fact that the painters selected only certain phases of rapid movement, we are justified in claiming that they were conscious that art is governed by visual laws which demand a different treatment and that taste tolerates conventionalities rather than radical representations. When we come to consider moving objects we find plenty of contradiction between what appears



ON THE TRACK OF THE LOGGING TRAIN

BY HENRY W. GERRANS

to be and what is. Driving clouds or a ship in full sail are easily photographed or drawn, simply because, although moving rapidly, their form varies very little as they proceed, and their apparent form is in no way different from their true form. Even the ever-heaving waves of the sea, though offering peculiar difficulty to the painter, on account of the rapidity of movement, are often correctly drawn. Indeed often more true to moving nature than the petrified presentation of photographic impressions of a thousandth of a second.

We cannot, after what we have just said, be accused of partiality to photographic art. We have pointed out its limitations and perhaps ruthlessly shown its shortcomings in art, but let us say every painter must candidly acknowledge the great service photography has rendered him by treasuring up those transient shapes of sea beauty which his pencil despairs of recording. The Old Masters, even the Venetians, who lived upon the very bosom of the sea, give us but crude representations of the sea. It was left to modern art, we might almost say to contemporary art, to study the volume of the moving waters for its own beauty independent of its association as a conventional background for human motives. Turner and others come very near nature. They give us the impression of mass and volubility, of transparency and mobility. They show us admirably the lapping and curling of the waves with their lace-like tracteries, the intermingling of light and shade, broken up by the little surges and ripples; yet, in all probability, it was not so much their quickness of perception as the revelation of sea movement by the camera. Understand we are not maintaining that all photographs of sea action represent artistic movement. Many present but a petrification, the result we are inclined to believe, of using a too rapid shutter. Few photographs of the sea



BRINGING DOWN THE LOGS

BY HENRY W. GERRANS

in motion have ever equaled M. Le Gray's superb pictures, and when we recollect that these were taken in 1852 when the comparatively slow wet plate was in requisition, we may be right in saying that the one-half second exposure is more likely to give artistic impression of movement than an exposure of one one thousandth of a second. And so, too, in the representation of a waterfall an exposure of a second, or even of two or three seconds, will give a more artistic picture than a very quick snap. The brief exposure totally destroys the representation of the true watery texture; the spray is apt to look like wool or soapsuds; and besides the darker rocks are rendered out of tone and almost devoid of detail. The recurrent movement of the water, with an exposure of a few seconds, will not cause a blur, but will give the fluidity and mobility of the fall much more true to nature and more acceptable to the painter, as I have frequently proved.

But let us return to the discussion of our dictum, that it is not the business of the pictorial photographer to photograph moving objects contrary to our visual impression. There are plenty of artistically true positions, which a moving figure takes for our selection, possible with the use of a slow shutter. Let us suppose an example: We have two men walking, one of whom has his left leg forward, and the other his right leg. They are going fair heel-and-toe, perhaps not very elegantly, but at any rate it conveys the idea of walking. Now it is self-evident that in walking the legs must pass each other at every step. Let us endeavor to draw or photograph our pedestrian at the moment when one leg is passing in front of the other, and we shall find it impossible to give the idea of fair heel-and-toe walking. Now, why is this? The reasons are two-fold; in the first place, at each step there

is a momentary pause when both feet are on the ground, and the eye seizes on this pause and naturally associates the position the legs are in with the action of walking. Secondly, it is only in this position that any idea can be given of the length of the step and the rate of the man's progress. A photograph taken at the moment when one leg is passing the other would not convey the impression of forward movement. In nature it is the actual motion of the legs which causes the attitude to appear all right, but if we could arrest it instantaneously the action would appear as cramped in nature as it would in a photographic portrayal. During a thunderstorm at night, if you should ever happen to see a walking or a running man illumined by the flash of lightning, you will notice that he does not appear to be moving at all unless the flash should happen to occur just at the time when his legs are fully extended. The attitude appears always more or less cramped, unless the moment is seized when the runner's legs are fully extended.

The old-fashioned way of representing a horse galloping, the hind legs invariably on the ground and the fore legs well bent (as old, anyhow, as the Assyrian sculptures), was blindly adopted by successive generations of artists up to the early part of the nineteenth century. Vernet was the first to innovate. His studies of horses in motion are superb, the action is always spirited, yet true to nature. His method has never been improved upon, though one occasionally sees a photograph of a moving horse which reminds him of his pictures. Vernet had quick visual perception and artistic selective ability. One would think, too, that Michael Angelo's eye had a sort of photographic shutter attached, so close do his moving figures approximate finely selected snap-shot pictures.

Charles Leslie has called attention to a peculiar conception of Angelo's "Judith and Holofernes." The headless man turns on his couch, and the rustling of the curtains, occasioned by the upraised and moving arm, causes Judith, who is about to escape, to look back. Thus the terror of the scene is indescribably heightened by an attention to the fact of the continuation of muscular movement for a short time after decapitation. The reeling "Bacchus" of Michael Angelo's is another striking example of the visual perception of this great genius. The sixteenth century painters and sculptors ought to be studied by every photographer in search of pictorial movement. Their work is simple, natural and true. Andrea del Sarto's "Madonna della Arpie," standing so firmly and strongly on her feet, gives us the impression that she is really able to carry the heavy Boy on one arm. The way in which she has propped the book against the thigh and rests her hand on the edge, so that a large and coherent design is formed, is a magnificent example of the way in which these sixteenth century painters show life, force and energy.

We want to show the great advance in the representation of spontaneity of movement of the sixteenth century painters over those of the previous century. True, the fifteenth century enjoyed the highest degree of charming movement in the light-footed figures that speed across its pictures. This motive was used with good reason by every artist. In the picture by Ghirlandajo of the "Birth of John the Baptist" we observe the angel with the candle approaches swiftly, and the servant, who brings fruit and wine, comes bursting into the room, her drapery blown out by the breeze. You will note the position of the feet, giving admirably the heel-and-toe movement referred to above. This representation of movement, so characteristic of the age, finds its sixteenth century counterpart in the picture by



AT CARMEL BY THE SEA
by W. E. DASSONVILLE

Raphael of the fire in the Borgia Palace (*Incendio del Borgo*). The whole difference in the idea of form lies in the contrast between these two figures. This woman engaged in carrying water, who supports her burden with stalwart arms as she walks quietly erect, is one of those magnificent creations of Raphael's mature and manly sense of beauty. It may not be fair to say so, but it was in the sixteenth century that Baptista Porta discovered the "Camera Obscura"; Raphael and Angelo may, after all, have put their heads under the focusing cloth. In Raphael's picture of the Transfiguration we shall notice how quick an eye the great painter possessed. The rapidity and suddenness of movement on the part of the mother of the demoniac boy, whom the Saviour had just healed, is such that the draperies have not had time to follow the impulse of the body. She alone has turned. Her girdle left behind by her movement seems to be placed awry, but we soon perceive that if she were to return to her former attitude, it would be in its proper place.

Raphael always left around his figures the space necessary to indicate the position in which they were at the moment immediately preceding that chosen for the theme of the picture. He was careful not to fill up the void which in their movement would be left behind them. We here see how it is that Raphael succeeded in giving to his figures that spontaneity of movement and that true and serious grace which leaves an impression so powerful upon intelligent and sensitive minds. Instances may likewise be selected from the works of Titian, the great Venetian painter, in which the expression of movement and animation is portrayed in a wonderful manner. In a small painting, representing Christ appearing to Mary in the Garden, the Magdalen seems fairly to run forward to meet the Lord, her hair streaming and her drapery denoting the utmost rapidity of action, while the hand stretched forth to touch Him is suddenly checked by His words: "Touch me not."

Lessing, the great German critic, in his essay entitled "The Laocoön," or the "Limits of Painting and Poetry," tells us:

"All appearances of nature which in their actual state are but of an instant's duration—which can be what they are but for a moment—all such appearances, be they pleasing or be they horrible, receive through the prolonged existence which art gives them a character so contrary to nature that at every repeated view we take of them the impression becomes weaker and weaker till at last we turn from the contemplation in weariness and disgust."

Le Mettrie, who had himself painted as Democritus, the laughing philosopher, laughs only at the first time we look at the picture. Look at him often, and the philosopher is converted into a buffoon and his laugh into a grimace. We all feel how disagreeable an unmeaning laugh is, and in a portrait, unconnected with story or incident, it becomes unmeaning or worse, especially when the face is made to look at us.

In the wonderful antique group of "The Laocoön" the father and his sons are being crushed to death by huge serpents, but the sculptor does not seek to represent in the countenances of the sufferers the distortion which actually accompanies the physical and mental anguish, but the spirit of a great self-collected soul is portrayed. The beholder is rather led to the contemplation of the extreme expected, while he does not actually see it—and so the true end of all art is accomplished by leaving something to the softening influence of the imagination. The



ROSES

BY R. S. REQUA

emotion of the horrible is eliminated by the presentation of a phase, which is not displeasing by its continuation in art.

In other words, that which is beautiful in a work of art is beautiful, not to the vision as a single isolated phase of a continuous action made forever unchangeable, but as it is suggestive of succeeding phases, stimulating the imagination to create for itself something which is not actually presented to the eyes, but effected nevertheless by their means. The mind thus anticipates, carries itself beyond what could have been actually represented at the precise moment the scene depicts, and its delight is thereby intensely increased.

It is not pretended that photography will ever aspire to enter the province of imaginative art. With all its vaulting ambition it has never presumed to "o'erleap itself"; but this shut door does not prevent or debar it altogether an entrance to the temple of art. We believe it has, and will continue to produce, pictures which stimulate the beholder to create mentally something which is not actually before the eyes in the theme it undertakes to represent. That is, it may in a measure be suggestive and bear strong marks of the individuality of the photographic artist, of his permanent personality and of the more or less accidental impression produced upon him by the sight of the object before his vision.

One of the methods of rendering a photographic picture suggestive is dependent upon the manner in which the idea of motion or movement is conveyed, in which instantaneity so-called has no part or lot. By a scrupulous adherence to actuality in movement it takes away the very appearance of reality, motion, life, action, because it represents the object as if it were petrified in the transient state, fixed constantly in a position which could not be preserved for more than an instant without pain. How insupportable do those statues of heroes become as we behold them upon their solitary pedestals with arms extended, forever holding that uplifted sword. We look for some indication of what has immediately gone before and also

something of what is about to follow. It is only thus that a figure simulating movement can have full truth and power of expression. The artist, painter or photographer must ignore, in some measure at least, the extremely narrow limits of the single attitude. This lack of the impression of a continuity of movement is particularly felt when reviewing some of our statues of military heroes.

I recall a photograph of a group by the French sculptor Paul Baudry in the foyer of the Paris Opera House. Notwithstanding the violent simulation of motion in outstretched legs and arms, there is conveyed only the impression of an unpleasant mobility. The group is a representation of what a snap-shot would give of a similar congregation. It presents purely arrested motion, there is no co-ordination to a general movement, which the mind itself should supply. All the movements do not trend to the idea of one impression. We have spoken above of the petrified military heroic statue, and of its immobility giving an unpleasant impression, but let us place the same military hero, with uplifted sword and his steed with elevated legs, in fact, in the precise sculptured attitude, in a painting marching at the head of a victorious host with streaming banners, and the mind of the beholder has something to turn to for relief, to refer the attitude to the violent movement, and at once the impression becomes strong and full of meaning.

It might be well, therefore, for the photographer to follow the method of the painter when desirous of conveying the idea of movement, and not to endeavor to seek the representation of action in transient attitudes. A transient attitude may indeed be depicted, but not isolated from its connection with the associated motive, so that the mind weary not of the perpetual sameness.

By association of a special phase in the movement the photographic artist might give an intensity and energy of action to a picture which the isolation would find very difficult if not impossible to support. The figures introduced in a photographic study should be surrounded by that which is needed to explain them, so as to show their relation to the rest of the work.



THE MARKET

BY WENDELL G. CORTHELL

The Commercial Importance of Proof Retouching

By FRED VERNON ADAMS

Much has been said and written of the art and technique of photography. Of posing, lighting, expression, and so forth; but few seem to care to express themselves on that all-important phase: the proper representation of the article we manufacture and offer for sale. Many photographers seem to place too little importance upon the appearance of their proofs. They take it for granted that the customer will understand that it is "only a proof," and will "finish" all right leaving much to the imagination of the sitter as to finished results. Many photographers are "penny wise" in the fact that they seem to think that any scrap, of any kind of paper, of any size is all that is necessary for a proof. And from this they expect to sell the finished high-grade article. Admitting the photographer's skill at lighting and posing, he has still the exacting and even exaggerating effect of the lens to contend with.

In life many of the lines of age, worry, sorrow, or dissipation are greatly disguised or hidden by the color and motion of the muscles of the face as we see the subject during conversation. Rob that face of its color and motion, as we do in photography, and we have merely, lines and light and shade to perpetuate a memory of that which may have been dear to us in the countenance of the original. A little time spent intelligently with the retouching pencil, will modify or remove the exaggerated lines and deep uncomplimentary shadows, which produce that care-worn, sorrowful, cross or aged expression, often so foreign to the countenance of the animated original. By using a soft pencil this can be done very quickly on each negative, without altering materially the likeness, yet greatly beautifying the product. To do this successfully, it is essential to have a thorough knowledge of the lines of the face, which by being lengthened or shortened, made broad or narrow, will produce the modifications of mirth or sadness, and kindred attributes of the countenance.

This knowledge is not unlike that faculty which makes the caricaturist a success. The face to the real careful observer, or student of physiognomy, is like a map which delineates clearly the character of the person, his age, his temperament, his emotions, and even in many cases his occupation. In the forehead we will find the lines of sorrow and worry drawn by an over-worked mentality. In the corners of the eyes the lines of age, between the eyes the lines of severity. Under the eyes the marks of sickness or dissipation, around the mouth those of mirth and gladness, and in the chin indications of force or weakness of character. Many of these lines, although representing cold, stern facts, are neither pleasing nor complimentary, should either be removed entirely or intelligently modified, before proofing.

This being properly accomplished, let the negatives be proofed on paper sufficiently large to represent adequately the picture and printed to as near the depth of the finished photograph as possible. The proof should then be trimmed oval, square, oblong, or panel as the artist may think best suited to the pose. Now the proof can be placed on the proper mount and be submitted to the customer, almost as perfect and tempting as the finished article. Many an additional position can be sold and many a resitting avoided by thus properly submitting the proofs.

Proper Exposure of Gas-Light Papers

By J. HARMANUS FISHER

We have been making some very carefully conducted experiments with a definite object in view, and think that statement of these may prove of benefit to others. The determination was to ascertain, most positively, the proper exposure for certain negatives of varying density, with three different papers, and with different developers.

The result with one of these negatives will be given. The first developer used was the Edinol formula given in directions accompanying Rotox, an equal quantity of water being added.

Special Portrait Velox. With this, by trial strips, it was ascertained that an exposure of 60 seconds at 24 inches from the light gave a fine result in precisely one minute, and that development there practically ceased. Rotox No. 3 paper was next tried and resulted in establishing the fact that 45 seconds, at 24 inches, gave the one minute exposure in the same manner as the former Smooth Portrait Cyco way then put forth for trial, the result being the record of 100 seconds, 24 inches, one minute, and was succeeded by Art Cyco, which registered 110 seconds, 24 inches, one minute. The succeeding trial was with the Edinol-Hydroquinone. No. 16 formula, given in the booklet which is issued by the makers of Edinol, Acetone-sulphite and so forth.

This, it is stated, should be diluted with six to ten times water. Eight times dilution was used. The first trial was with the Special Portrait Velox, and a strip was exposed for the same length of time, 60 seconds, as in the former trial; this merely to ascertain how near it would reach, although we knew, as the result of former use, that more exposure would be necessary. Here is the result with this developer: Special Portrait Velox, 120 seconds, 24 inches, 1½ minute. Smooth Portrait Cyco, 200 seconds, 24 inches, 1½ minutes. Having ascertained that 120 seconds was correct for Velox, 200 seconds was the proportionate exposure for the Cyco as compared with the exposures in the first case and this, at once tried, was found correct. We have omitted to mention that this developer was used with the addition of an equal quantity of water. The same, No. 16 developer, was used in the third trial, but without the added water, and the record was: Special Portrait Velox, 110 seconds, 24 inches, 1 minute. Smooth Portrait Cyco, 184 seconds, 24 inches, 1 minute. Here too the proportions are as before noted. We concluded with the use of the Metol Hydroquinone formula given in the Velox Manual, diluted with an equal quantity of water.

Special Portrait Velox, 100 seconds, 24 inches, 1 minute. The proportionate exposure, according to the aforementioned experience, would be 166 2-3 seconds for the Special Portrait Cyco, but this would not answer with this developer, and the record is Smooth Portrait Cyco, 125 seconds, 24 inches, 1 minute. The trial of the Rotox was not extended beyond its Edinol formula, which is so effective as to leave nothing to be desired, and the one trial of the Art Cyco sufficed, as it kept so closely to the Special Portrait Cyco in the result.

Now what is to be gained as the result of this work? Much, we think. We have before us the three negatives of varying densities, and records of exposure

(correct), for each, with the different papers and developers. Approximately, at least, we can by comparison with these negatives, determine the proper exposure to be given with another negative which we desire to print; but the color, as well as the density is a factor that not infrequently interferes. We would then merely make a trial exposure such as seemed likely to be correct and see if it developed to satisfactory results in the one minute; and feel quite sure that the records in hand will prove useful.

The exposures were made to the "Cremo" No. 1 incandescent gas-light, a ground glass interposed between it and the printing-frame.



HAZEL

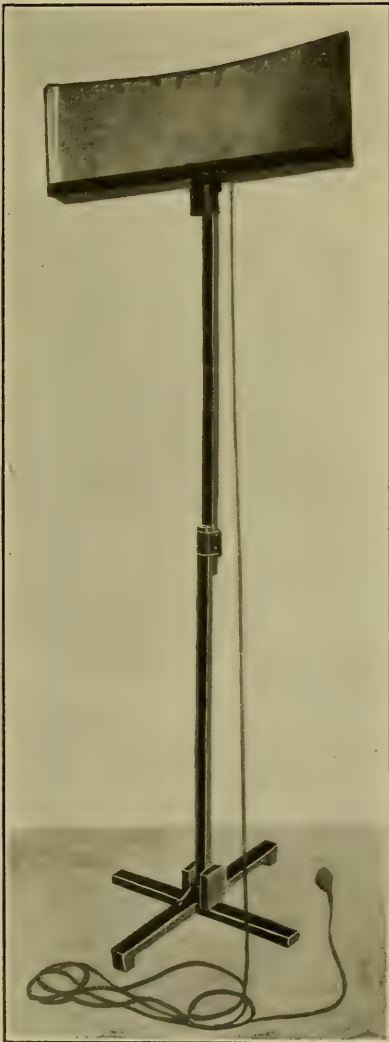
BY MRS. B. G. PEART

A Home-Made Flash-Lamp

By FRED G. WRIGHT

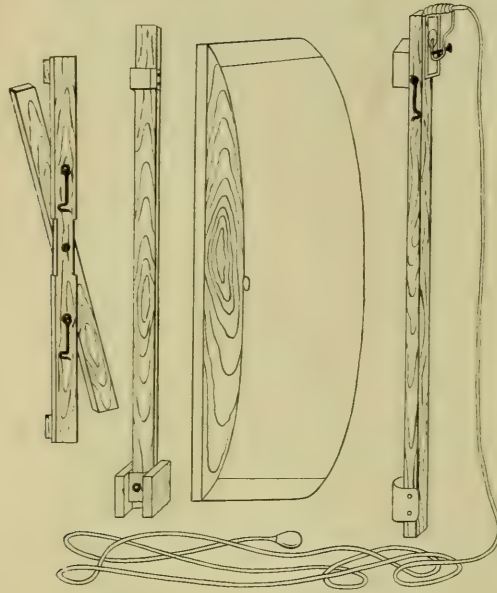
Not finding anything on the market of the size I wanted selling for less than twenty-five dollars and that obtainable only from Chicago with all the attending delay and additional expense of express charges, I decided to try my hand at building one for myself. I wanted one that would give me illumination for an interior of any size, and one that would be fairly portable. The illustrations herewith, will, I believe, give others a very clear idea of the apparatus.

The bottom crosspieces which serve as feet for the stand are respectively twenty and twenty-four inches in length. They are fastened together with a small bolt at the center, allowing them to fold together for convenience in carrying. The shorter piece allows a block of the same thickness to be nailed or screwed to each end of the upper or longer piece, so that when opened, the four ends form a solid and level support. The lower upright piece is thirty-four inches in length and the upper one a few inches longer. The piece acting as a tray is thirty-three inches long and one and one-half inches wide at the ends. The back is formed of a piece of galvanized iron eleven inches wide and long enough to reach around the back and both ends. The pocket and band on the two uprights are made of sheet brass and their construction clearly shown in the drawing herewith. A pair of screw-eyes and hooks as shown, hold the pan in position and two others serve to attach the standard to the base.



The lamp proper is made from a one-dollar Luxo flash-lamp which had been given me some time before. I took it apart and used only that portion shown in the drawing. The metal blow-tube is filled with cotton saturated with alcohol. The powder is laid in a train on the pan so that when the bulb is pressed, a flame shoots from the mouth of the blow-tube through a small hole in the flash-pan and ignites the powder. On the pan and directly under the hole a thin piece of wood may be placed if it be desired that but a small flash be set off. If more powder is to be burned, this piece of board can be removed to allow of more powder being placed in position.

I have used this home-made lamp a great many times and under all kinds of conditions, finding it always successful as a means of setting off a flash of any strength. With it I use some twenty feet of rubber tubing which allows me



to stand at the camera and discharge the flash whenever desired. Where the ceilings are high and the room or hall quite large, the apparatus may be placed in a chair, care being taken to see that the bottom is weighted down with some large books or other heavy articles.

For Photography is an Exacting Master

As Michael Angelo said of art, so we may say of photography, the painting with the finger of light: "It is a jealous thing; it demands the whole and entire man." We may bring to it all we know, or can know, of physics, chemistry, astronomy, mechanics, geometry, and drawing, and still it will ask for more. But it also offers and gives, a goodly reward; and whoever has studied these things in the earnest prosecution of photography has found his knowledge of them corrected, deepened and enriched by the use of the camera, which is at once the most truthful recorder of the kaleidoscope changes of the visible and invisible phenomena of nature, and at the same time may be made the most obedient servant in the retinue of art.—WILLIAM M. MURRAY.

Hence it is that the search in common for certain qualities, constitutes a real school, as distinct from a set of imitators. The Dutchmen tried together for the same things for what has been called a portraiture of nature; for accuracy and subtlety of painting upon an accuracy and subtlety of drawing which serves as a base.—JOHN LA FARGE.



HER MOTHER'S GOWN
by ANNIE W. BRIGMAN

Starr King Fraternity Exhibition

By ANNIE W. BRIGMAN

The fifth annual exhibition, under the auspices of the Starr King Fraternity, has marked another mile-stone in its progress toward the desired end of creating a permanent Art Fund for Oakland. The spacious walls of Maple Hall were hung with beautiful, individual things, some glowing with color while others were low of tone and full of mystery. Away at the end of the hall, in a small room that was like a tiny side-eddy in a stream, hung the photographs. I was proud of the beautiful, dignified array of prints, many of which were created with feeling and careful thought. It is proved daily that the lens *can* be a medium of individual expression. There are those who cry "faked" when other means are used with it, but are we not living in an age in which we are free reasonably so to do as we please? Who is going to limit himself to one tool when two or more will make his workmanship more beautiful? I claim the right to run the gamut from a lens to a shoe-brush to gain a desired effect. For a general word, *Photography* is probably a necessary one, for, like the rain, it falls alike on the just and the unjust.

Lens studies sound more fitting for some of this work. Take for instance the design for book-plate, "Woman Reading," by Laura Adams Armer. This is a sample of pure lens work exquisite in conception. A fit contrast to it is her print entitled "Laurels." The foundation work was done with the lens but she has used other means of carrying out her idea. But what odds? Something beautiful was created and people were pleased.

Hana Robison sent exquisite portrait work, the one of Charles Keeler, the poet of Berkeley, and the character study, "Before the Gringo Came," being especially fine. They impressed me as having the peculiar elusive quality that we call *soul*, which Emily Pitchford has also caught in her study entitled "Woman Glancing Over Her Shoulder." "Reading Mother Goose," by Edwin Cohen, was a very attractive child study. A series of three yacht pictures, "White Wings," by Philip Carlton, were especially breezy. Of Edwin R. Jackson's work, the most realistic was "Seeking Revenge." It was thoroughly fused with the spirit of its title. W. E. Mulwain exhibited some particularly fine tree studies especially the Monterey cypress. "A Village Street in Switzerland," by William Rabe was exceedingly good in composition. "The Sheriff," by Maurice Stewart, which was seen in our last San Francisco Salon, was one of the prominent prints. The studies of Mexican child life by C. E. Townsend were interesting. "Sacred Deer," by Dr. Ernest Sisson, was interesting because of its suggestion of gentleness. "Yosemite," by Effie Sisson gave a splendid idea of one of California's grandeurs. The "Clam Sheller," by Edward McKeeley, is a typical fragment of Chinatown. The "Old Forge," by Constance Meese, was fine, and I only regret that it was not finished with a frame. Frank Harrold's studies of oaks, the splendid, gnarled giant kind, attracted much attention. A charming series of child portraiture was the work of Maria S. Cutting.

It is often repeated that this art must always be spelled with a small a—but wait! Some of us carry big A's up our sleeves.



MOTHER AND CHILD
by ADELAIDE HANSCOM

The Quarter Centennial Convention of the Photographers' Association of America

If you were at St. Louis, attending the World's Fair Convention, you surely wore one of the "Meet Me in Boston, in 1905" checks, now we will expect you to check yourself through to Boston, where we will have the greatest convention of all, celebrating the quarter centennial of our Association.

I want to see the grandest display of portrait photography in our history, and you can help to make this exhibit the success it is going to be. Don't say that I am beginning on you too soon. It is never too early. The more thought you put into your work, the more will this thought be evident in the results, and *you* will be the one to profit by it. I can assure you the best treatment of your life, at the hands of the New England boys, as they know how to entertain their guests. I speak from experience, having spent two very pleasant weeks with them, and attended their convention in 1902, and had such a delightful and profitable time that I want all of my Western friends to attend the Boston Convention and share the pleasures and credit of the best meeting for years.

It is the intention of your Executive Committee to make this convention "a hummer" and they want you to participate in the feast of good things that have been planned for you. We have offered \$800 in gold to be competed for by those who wish to enter for something substantial. For those who do not care to compete in this class, there will be ample space for complimentary exhibits, and all work reaching a sufficiently high standard of excellence, in the opinion of the judges, will be given a beautiful certificate of merit, worthy to grace the walls of any studio. These certificates of merit are not to be awarded to those receiving cash prizes, as the cash prizes will be the evidence of the degree of excellence reached by those receiving them. Exhibitors will enter work in one class only. An exhibitor entering in one of the competitive classes will not enter in the other, or in the complimentary class. Any one entering in the complimentary class will not enter in either of the competitive classes. This ruling is made with a view to ascertaining the wishes of the membership in regard to the conducting of our conventions.

The Convention will be held in the Mechanics' Building, one of the best appointed buildings we have had for years, and the Lenox Hotel has been selected as official headquarters, and is located only about four squares from the convention hall. While in Boston you will have the opportunity to visit their numerous art institutions, the Boston Museum of Art, one of the best in the country, can be given a whole day of your time with great profit. A great many places of historic interest are found in and around Boston, and may be visited while on the convention trip this year. Some of the best appointed studios in the country are located in Boston, and the Boston photographers are always courteous, and will be pleased to have you call on them. The entertainment committee will plan an afternoon at some one of the numerous beaches, where you will have the pleasure of an old-fashioned New England shore dinner. The ladies will be well taken care of by the committee consisting of the following ladies: Mrs. H. A. Collings, Mrs. F. R. Barrows, Mrs. Ben Krieger, Mrs. George M. Bolton, Mrs. Ed Packard and Miss N. J. Hall.



A QUIET EVENING

BY F. M. BRADDOCK
Pacific Coast Exhibit A. F. of P. S.

But the best of all the Convention. We will have a program that will be interesting, instructive and that will do us all good. Now, get busy, and make the work. Send exhibits to Boston, compare it with the other fellow's productions, see which excels and why it does so, and if his is best, go home and try again, come back at him next year and beat him out. You cannot compare your work with that of others, by leaving it at home. Don't wait till you reach Boston, before paying your dues. You know what that means, a long wait in the line at the Treasurer's window (a line that will be longer this year than ever, as there will be so many new members to enter on the books), therefore send your money *now*, to F. R. Barrows, 1873 Dorchester Avenue, Boston, Massachusetts. If you are a member, send your dues for this year. If you have not been a member and wish to join the Association this year, send three dollars for membership fee and two dollars for annual dues. For any further information in regard to the Convention ask any member of the Executive Committee.

Fraternally yours,

C. J. VAN DEVENTER,
First Vice-president, Decatur, Ill.

Learn the technique of photography well, then use it wisely.

Learn to look at and choose subjects for their simplicity of form.

Then, having learned to see, choose your own material, and deal with it according to your own lights and taste.

Never forget the limitations which necessarily hedge in photographic and other methods of monochrome art.

W. THOMAS.



CAMERA CRAFT

ISSUED MONTHLY BY

The Camera Craft Publishing Company

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. X

SAN FRANCISCO, CALIFORNIA, APRIL, 1905

No. 4

Is It Inconsistent?

One of our correspondents recently took occasion to criticize CAMERA CRAFT for publishing in its last issue two articles not conforming to the same belief: One of our contributors had advocated the use of a certain photographic utility, while another discredited the claims made for like devices. Others wrote, upbraiding us for the fact that both appeared in the same issue. A third reader, a local one, commented on each of the apparent inconsistencies. Many others have no doubt noticed the point raised, but failed to voice their opinions. None of these gentlemen found fault with either article. Candidly, would our readers prefer a journal that allowed but one side of a question to be heard? Would they care for a publication that admitted to its pages only such matter as met with the approval of one man, its Editor? Would they ask that they be protected from arguments, fearing that their own judgment was incapable of a decision? Would they, in all seriousness, appreciate, even were it possible, finality in all things placed before them, even in the pages of CAMERA CRAFT? It is feared that the major portion of our readers would not. CAMERA CRAFT will continue to print such matter as seems sincere and logical, and should an expression of contradictory opinion result in the same issue, we shall feel it no more illogical than were a month or more to intervene. The Editor will content himself in avoiding, as far as possible, the publication of matter likely to be misleading. He will attempt no dictatorial policy as to what his readers shall accept as their own convictions.

A Department of Criticism

As many of our readers know, the Editor has criticized prints sent in for that purpose since his connection with this magazine. We have long believed that the same amount of work could be made more effective by printing the criticisms together with the pictures, so that others than the maker could be benefited by the advice. We have at last secured the promise of a capable critic that he would undertake the work, and therefore invite our readers to send in their prints. We have

no idea how many will be received, and for that reason can make no promises. If the department meets with the approval of our readers it will be continued. If too many prints are received, limitations will be placed upon the number submitted. At present we would suggest that you select some print that you think is good, or one that has been admired by your friends, and mark it for criticism, sending at the same time a few others of your average productions. We do not wish prints that aim only at being records of some object or event, although such may often be made pictorial if rightly handled. Criticism will be made on artistic lines, and the prints selected for review will be those that best respond to such treatment. There are no coupons to fill out, you need not be a subscriber, and your name will not be used. Simply put a few prints in an envelope and send to: The Critic Editor, CAMERA CRAFT, San Francisco.

The Portland Convention This Fall

A letter from Mr. Hicks comes just as we go to press. He asks that we assure the members of the Photographers' Association of California and others interested that the enthusiasm and interest displayed by the individual members of the Northwest Association when seen by him can only be construed to mean that every effort will be made by them to hold, in connection with the P. A. of C., one of the most successful and creditable conventions in the history of photography. Every effort possible is being put forth to the end that the gathering will be as complete and representative as can be desired. Hearty indorsement of their plans have been received from every photographer in their section, and it only remains for the members of the California Association to do their part to insure complete success. The fact that the securing of the following National Convention for the Coast, will in no small measure hinge upon the success of this joint convention at Portland should be a double incentive to us all. Work is required. Let us all put our shoulder to the wheel and help to make the Portland Convention one that will be a credit to the photographers of the Coast.

The Success Merited

Harris-Ewing, photographers, opened their new ground floor gallery in 1311 F Street, N. W. Washington, D. C., on Friday, February 17th. CAMERA CRAFT extends to these gentlemen its best wishes and its congratulations on the success which has fallen to them so early in their new location. That their work should receive the appreciation which it so justly merits is no surprise. That their untiring energy and pleasing personalities can result only in increased success there is no question.

Death of Charles S. Abbott

Charles S. Abbott, President of the American Aristotype Company and Vice-president of the Eastman Kodak Company, died at Oak Lodge, near Enfield, North Carolina, on the evening of March 1st. His was an unusual personality. Liked by those who knew him but slightly and loved by those who knew him well, his friendship was worth while. He leaves a wife and two children, Miss Margaret Abbott and Charles S. Abbott, Jr.



A Photographic Digest



By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

Dark Room Illumination

For a long time I have had my dark room (which is 12 by 20 feet) illuminated with two incandescent burners enclosed in opal shades and surrounded by a cylinder made of a sheet of ruby celluloid covered by a sheet of ordinary yellow paper; this is closed above to prevent reflection from the ceiling but is open below where the white light from the opal globe falls directly on to a black surfaced table. I can thus always examine any object I desire by white light, while developing is going on, or I can use this light for printing bromide paper—without fogging an open roll lying a few inches away from the circle of its rays. I have an abundance of light for all purposes, and yet develop orthochromatic plates without fear. I have used as stated the ordinary yellow paper sold for photographic purposes, but Dr. Castellain in a paper in the *Revue de Photographie* states that the best paper for fitting actinic light is made as follows:

Alcohol	10 ounces
Auramine	25 grains
Alcoholic solution of saffranine	
($\frac{1}{2}$:1,000)	1 ounce

Good drawing paper, such as Canson, immersed in this for a minute, will take a fine yellow color, which is a little less marked when the paper is dry. Examined by transmitted light, it appears of a deep orange yellow.

If a sheet of this paper is fastened down upon a piece of ground glass it is possible to develop even the fastest plates, not orthochromatic, at a distance of a couple of yards

from the paper, using good diffused daylight as the illuminant. If ground glass is not convenient a sheet of white paper may be fastened on a sheet of plain glass as a substitute.

The Drying of Colors

The rapidity with which a paint or ink becomes dry is intimately associated with possible progress in photographic and photo-mechanical methods. Pigment printing processes in which the pigment is applied to a film capable of selectively fixing it are among the newcomers, of which the apostles of individual control prophesy great things. A quick-drying mixture of oil and pigment is a desideratum in such processes, and of immeasurably greater importance still in tri-color processes with half-tone blocks or colotype plates. In these connections the report of the research laboratory of the Imperial High School of Graphic Arts in Berlin may be quoted, as part of the recent work in that institution has been devoted to the drying of inks. It was found that the time required for oil inks to dry was in no way connected with the proportion of pigment which they contained, but is connected with the chemical character of the pigment. Many colors with which oil was mixed in no large proportion were found to dry extremely slowly. Among these were zinc white (with 25 per cent of oil), cinnabar (with 20 per cent), light ochre (with 45 per cent), ultramarine (with 50 per cent of poppy oil). On the other hand Prussian blue (with about 100 per cent of oil), chrome-green (with about 100 per cent), cobalt-blue (with 140 per cent poppy oil), dry in one fifth to one

tenth of the time required by the above-mentioned mixtures. A remarkable difference exists in the behavior of chrome oxide green (anhydrous oxide of chromium), which with 30 per cent of poppy oil does not dry quicker than the hydrated oxide green of chromium, which requires more than 100 per cent of poppy oil. The pigments have very different effects on the drying oil, and this reaction is so great as to swamp the differences which may exist in the proportion of drying oil. The experiments suggest the advantage which can be taken of suitable combinations of pigments and oils. In other words, the pigment can be selected to play the part of a "drier," and, unlike the drier usually used, will be present in an insoluble condition, and, therefore, free from the danger of producing ill-effects if the proportion of pigment to oil becomes unduly great.—*British Journal of Photography*.

Blisters Made on Bromide Paper

During the cold weather considerable trouble has been caused by blisters in bromide paper, not only in large enlargements, in which they are very apt to appear, but also in small contact prints. I believe the large blisters in enlargements are caused by the handling of the large prints in the various operations of fixing and washing, especially when the prints are of large size, 20 by 16 and over, for in ordinary professional workrooms such prints are rather out of the ordinary routine, and the dishes, and so forth, are often not large enough to take such without folding over, and creases and bruises are almost unavoidable, especially when single-handed. Such creases are a prolific source of blisters; but the most annoying are those small blisters about the size of a small pea, covering nearly the whole of a small print. They do not appear until the washing after fixing, but they often entirely disappear on drying, and come up again when the prints are rewetted for mounting. They will often again disappear on drying, but occasionally, in rolling down the print, some of the blisters break, and the print is spoiled. This kind of blister is very annoying when prints are toned by the "sulphide" method, as they not only increase in size and number, but often become stained yellow, apparently owing to the difficulty of washing out the various chemicals used in the process.

Just before Christmas, when working against time, one batch of paper showed large crops of these small blisters, and a great many prints were spoiled. It was curious that one batch of paper blistered, while others of the same make and brand did not show blisters at all, although developed, fixed, and washed at the same time and in the same solutions as those that were covered with blisters.

A REMEDY

This state of things would have been serious at any time, but just then it was simply maddening, as there was no time to get fresh paper and to make experiments with it. Fortunately I remembered, while cudgeling my brains for a remedy, that we were often troubled with the same kind of thing in the bygone days of albumen printing. The remedy in those days was to immerse the prints in methylated spirit as soon as they were fixed, and before washing at all. This same remedy was tried, and proved a complete success. The bromide prints were taken straight from the fixing-bath and placed in a dish containing methylated spirit, and allowed to remain for ten minutes, and then washed in the usual way. No blisters appeared in subsequent operations, even toning with sulphide. The spirit can be used over and over again, and put aside for further use, but freshened up with a little new spirit when used again. The mixture of spirit and water formed when drying negatives or prints that are wanted quickly can be saved and used for the prevention of blisters. Although this method prevents the formation of blisters, I do not like it, for, apart from the cost (which is but trifling) and an additional operation (which is not a great deal of trouble), I have an idea that a bromide print dried, or treated with methylated spirit, never has the same brightness and clearness as those dried spontaneously, so I prefer a paper which does not blister. Why one batch of paper should blister and another of the same brand treated in the same way should not is a question I cannot answer.

LARGE BLISTERS

It has been suggested that the large blisters, which some bromide prints show when toned with sulphide, are due to grease on the surface of the raw paper. This seems a very good explanation, and is

probably the right one. But I do not think it applies in the case of the small blisters, which appear in a few minutes after the removal from the fixing-bath to the washing-dish. Neither does the difference in temperature of the different solutions explain it, as some prints from another batch of paper developed and fixed at the same time showed no blisters at all. The cause is probably some difference in the raw paper before coating.

We all know that difference of temperature causes blisters. Only last week carbon prints when removed from the warm developing water to cold alum solution were covered with minute blisters, but when the prints were put into warm alum solution no blisters appeared.

I would advise any one who is suddenly afflicted with blisters of the kind that appear in the washing after fixing to try the methylated spirit cure.—*Harold Baker in British Journal of Photography.*

Control of Gradation in Plates and Bromide Prints

I have on two previous occasions given details of the method of extending the scale of gradation by the use of potassium bichromate or chromic acid. To these methods must now be added a new process by C. Winthrop Summerville, who in the English *Amateur Photographer* concludes a lengthy review of the theory and practice of his method by the following working details:

"Prints, after exposure, are immersed for one minute in a solution of the following strength and composition:

Copper sulphate	1 grain
Potassium persulphate	2 grains
Nitric acid	5 minims
Water	4 ounces

The proportion of copper should not much exceed that given, although some makes of paper will stand a slightly greater strength, and otherwise there is a danger of fog with prolonged development. The print is rinsed after immersion, and then developed. Plates may be treated in precisely the same way with equally good results, and trial has proved the following to be amenable to the process: Barnet, Imperial, Kodak, Gem, both color-sensitive and ordinary varieties.

The strength of the solution may be considerably increased for plates, enabling sunsets and brilliantly lighted cloud effects to be obtained on the same plate without color screens. The following is an average composition of solution:

Copper sulphate	5 grains
Potassium persulphate	10 grains
Nitric acid	10 minims
Water	4 ounces

Gum Bichromate

I have been in the habit of reporting new or approved formulæ as they appear and herewith is the method adopted by one of our most successful workers, namely, J. Page Croft. In a lecture to the Derby Photographic Society he recommended that the paper be first coated with gum solution (1 ounce to 3 ounces water), and sensitized afterward, in preference to it being performed in one operation, as is sometimes recommended, and the following is the amount of color he used to the dram of ten per cent bichromate solution:

For a dead black .Lampblack,	1 gr.
For a warm black .Vegetable black,	1½ gr.
For browns	Brown color, 2 to 3 gr.
For reds	Red color, 4 to 5 gr.

The ground color was incorporated with the bichromate solution in a pestle and mortar, laid on with a hog's-hair brush, and afterward smoothed down with a badger softener.

Fixing Spotting Colors

A writer in the *Photographic News* recently described the following useful method: Colors containing organic matter—such as India ink and moist water colors—can be rendered waterproof by mixing with them a little potassium bichromate. Prints that have to be squeegeed, or for any other purpose immersed in water or solution after spotting, should therefore be spotted with color worked up with about a ten per cent bichromate solution and then exposed for an hour or two to daylight, when the colors will not be washed off the print when it is immersed in any liquid.



The Amateur and His Troubles



By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

Printing in the Sky

I contributed a print to a circulating portfolio a few months ago and as it came before the several members of the club, several of them commented unfavorably upon the skill displayed in the printing in of the clouds. I am perfectly willing to admit that I am a bungler at this kind of work and that these particular clouds were not well done, but the truth is, they were made on the same plate and at the same time as the rest of the picture. It was not my fault if they were not arranged just right. But what I am getting at is this: These criticisms are a good counterargument against the dictum of the printing in of clouds. If one can do it right I see no reason why fault should be found. When we realize how well-nigh impossible it is to secure them with the same exposure that the average landscape demands, we hardly need the further argument that they may not give the right lines or masses required in the composition. Let me quote a few lines from one whose words have more weight than my own can possibly claim. The late H. P. Robinson has said:

"The photographer is usually deluded into endeavoring to discover some method of taking the sky with the landscape, and almost certainly gets into a semi-scientific state of mind which takes more pleasure in conquering a useless chemical difficulty than in obtaining a splendid effect with ease that would give pleasure to the world. Experiment for experiment's sake is the enchanted forest in which many who might have grown up into good photographers get mazed and lost. There are, of course, occasions when it would be advantageous to secure the sky with the landscape on one plate, but they depend upon as many ifs as Touchstones.

If the lines of the sky compose well with the ground; if some other arrangement would not be more conducive to pictorial effect; if the sky will come as strong as it is in nature; if it can be got without sacrificing the landscape, and a great many other 'ifs,' then the sky would be better taken on the same plate as the ground, but not otherwise."

Photographing Against the Light

I can not understand why more of it is not done. There is a charm about the portrayal of this form of lighting that in itself goes far to make a picture pleasing. I once had a budding amateur under my tutelage and he wanted to be doing something all the time. In sheer desperation I gave him a lesson in this form: Take anything, a clump of trees, a bit of brook, in fact, anything in your regular line of work, and photograph it every hour during a period of ten hours. He did so. Of course he picked out a view that was seemingly impossible of good pictorial results but the last one of the series was a gem. It was made with the light shining almost directly into the lens, in fact, he complained that he had to disregard my orders to leave the camera in the same position and had moved it about a foot in order to shade the lens with the trunk of a tree. Right here is where the secret of successful work comes in when photographing against the light. Always see that the direct rays of the sun do not reach the front combination of the lens. This is easily done by seeing that the image of the sun itself does not come within the boundaries of the ground glass and then using the slide or something as a shade to protect the lens. Of course one must take care to see that the shade does not cut off a part of the view

but that is not hard to accomplish. Even with the sun included in the picture, good results can be secured if there is enough haze, light fog or even a fleecy cloud between it and the lens to reduce the intensity enough to prevent fog in the camera. A backed plate is an advantage in overcoming halation that is inclined to be pronounced. Another caution, and that is to be sure and not under-expose. These against-the-sun views will stand a much longer exposure than the inexperienced might believe. My own practice is to give two or three times more exposure than I would were the sun directly behind the camera. The form of lighting under consideration is certain to give the maximum amount of shadow and this in turn gives the minimum tendency to flatness in the resultant negative. Besides this, we must have detail in this abundance of shadow or the effect will be far from pleasing.

A Hint for Film Pack Users

R. H. Bowman of Fortuna, California, writes: Users of film packs will no doubt be interested in learning of a simple method by which they may develop a part of the films when convenient instead of waiting until all twelve exposures are made. This method is very easy, practical, and has proved to be a great convenience. Take the camera or pack adapter only, into the dark room; remove pack, and with a sharp knife cut along the edge and one side of the back. The exposed films being in the back of the pack may then be lifted out for development. The cut edges can then be sealed with black passe-partout binding to make the pack again light-tight or may be left unsealed, in which case care must be taken not to remove pack from camera or adapter except in the dark room.

Some Points Worth Investigating

I know we have several photomicrographers among our readers and a large number of subscribers are always interested in experiments. What I would like to see determined is the reason for the change in density of a negative as it is wet and dried. A negative becomes denser as it dries. If dried rapidly the density is greater. If wet again and dried the second time the density is increased. If partially dampened and then dried it sometimes loses and sometimes gains in density. These peculiarities can all be proved by

very simple experiments with a waste negative but why is it that these changes take place? Some one may have investigated the matter and may even have discussed it in some publication but if so, the results have escaped me. I would be pleased to hear from any of our readers with any theories, or better, any facts, that may explain the matter.

Some Peculiar Labels

I was in a dark room the other day and in looking around I noticed that all the bottles had a nice blank, gummed label place well up on their sides. I took pains to see if, perchance, one of the collection might not bear some indication of the contents of the bottle it graced. Each and every one was as blank as white paper can remain in an ordinary dark room. I asked how it was that the proper lettering had never been applied. It had. Each label was neatly inscribed in a good black letter on the under side. One had but to turn the bottle and read the name from the other side of the bottle. Of course, when the contents happened to be somewhat dark in color, this could not be done except the label was placed high enough to allow the contents to come below. The combination of a full bottle and opaque contents was so rare that little inconvenience was experienced; in fact, not half that arising from the ordinary plan of lettering the face of the label and having it soon spoiled by drippings from the mouth of the bottle when pouring out the contents. We are not all bartenders and consequently fail to instinctively turn the label upward before pouring from a bottle.

Cleaning Lenses

When one stops to think that optical glass is softer than window glass and that the dust in the air contains much that is in reality fine sand, particles that are nearly twice as hard as the glass used in the lens, there is little cause to wonder at the gradual destruction of the fine polish given the original instruments as placed in our hands by the lens-makers. In cleaning a lens the object should be to remove the dust without undue friction. Grease is also often deposited on the surface of a lens. For this reason leather is not the most suitable material. Well-washed cotton or linen is much better. Strips of pith such as can be

obtained from the stems of elder or the common sunflower, are perhaps the best that can be used. If the lens carries spots of grease or other matter that can not be removed in this manner it is best to send the instrument to an optician. Never attempt the use of rouge or chalk. Both are to be condemned for the reason that the polish will suffer and by continued use the figure of the lens will be damaged. Alkaline solutions of soda, potash or ammonia are dangerous. Absolute alcohol is not objectionable. The lens should be moistened with it only, wiped dry and then polished slightly with a little ether. The less friction that can be used is the most desirable.

About Distilled Water

A correspondent writes to ask how he can determine if the water bought as distilled is really what it is claimed to be, and if it is advisable to invest in one of the many household stills on the market. In using the still, the water which first passes through should be rejected as it contains nearly all the volatile impurities. Alike, the last remaining one tenth of the original bulk should not be allowed to pass from the retort or danger is incurred of carrying over other impurities. These matters attended to and filtered water used to fill the retort, the amateur should produce as pure distilled water with the household form of still as he can purchase ready distilled. To test for impurities, the addition of silver nitrate to a little in a test tube will produce a precipitate if chlorides are present; ammonium oxalate in the case of lime; barium chloride will disclose the presence of sulphuric acid, and a drop of potassium permanganate should give a permanent pink color to a larger bulk if no organic matter be present.

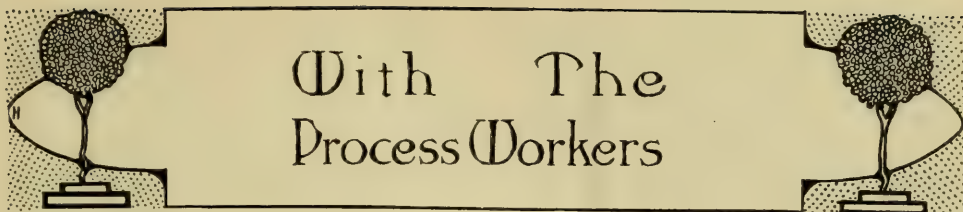
Two Practical Helps

The Editor has finally had an opportunity of trying the two very practical and convenient utilities put out by the Swartz and Martin people of Junction City, Oregon. They are all and more than the makers claim. With the Reversible Enlarging Attachment he made interiors, five by seven inches in size, using the regular Premo camera and lens. The negatives are sharp to the corners. The attachment folds practically flat and with one of them at one's disposal the ordinary four by five can be made into a

five by seven camera at a moment's notice. We all know how unsatisfactory it is trying to print a vignetted head, cabinet size, from a four by five negative. With this attachment the matter is simplicity itself on account of the larger size plate being used. The Multiplying Stamp Attachment is the handiest and simplest arrangement that it would seem possible to produce. With the one used the Editor made sixteen portraits on a four by five plate and made them one after the other almost as fast as one could withdraw a slide and replace it again. As you will see from the added line in their advertisements this month, they are perfectly willing to send these attachments on trial to responsible persons. This they can safely offer to do as we cannot see where any intended purchaser could be other than pleased with the added possibilities they place in his hands.

An Experiment I Have in View

Some day when I have the time I am going to take an unexposed plate, fix out the silver salts and after a good washing, stain the emulsion as evenly as possible with a solution of "auramin, O." This plate I will give a good double or triple edging of the common adhesive plaster of the druggist to prevent its edges and corners cutting, and then with it inserted in the bellows of my camera wherever it will fit snugly within the folds, go afield with ortho plates in my holders and try for a few of those subjects, such as sunsets and the like, in which good values are more important than minute detail. I have a theory that the results will be somewhat different from those secured with an ordinary screen placed directly in front of or behind the lens. At any rate it will be interesting and should any of my readers forestall me in making the trial, I would be greatly pleased to see some of their results. While doing this it might be well to, at the same time, try the effect of screens of a different color. The use of a film stained with blue or purple might give results suggestive of their applicability in securing particular effects. Using such a screen, one should of course take into consideration the predominating color of the view being photographed. It is evident that a view containing mostly vivid greens would give results entirely different from one in which another color predominates.



With The Process Workers

By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

New Method of Preparing Sensitizing Solution

A writer in the *Photo Korresp.* gives the following method of preparing the sensitizing solution for either ink or enamel. Prepare the following:

Ammonia bichromate	1	ounce
Citric acid	$\frac{1}{2}$	ounce
Distilled water	100	ounces
Ammonia	$\frac{1}{4}$	ounce

The claim is made that the solution will keep almost indefinitely. Four ounces of this solution added to the white of one egg and three ounces of water make the usual sensitizing solution. The same proportion for the enamel solution. It is also stated that gelatine plates and carbon tissue can be sensitized by this bath and that they keep better than by any other solution.

A Few Facts About Collodion

Of course, every engraver has trouble with collodion and any advice on the subject is always acceptable. The following from *Process Photogram* seems timely and good:

"Two phenomena are especially liable to creep up: (1) Fog which suddenly appears, without being attributable to the state of the silver bath or to the developer, and as suddenly disappears again, and (2) the non-adhesion of the film. The latter defect especially is the cause of endless difficulties in process work. The collodion film which yesterday held toughly and securely to the glass, separates from the intensified negative on

washing, or, more frequently, on drying. The film is so brittle that it loses its coherence, or at any rate, cannot retain its hold of the glass surface. There are two different reasons for the evil. An excessively brittle film is due either to the collodion cotton itself or to the quantity of water in the collodion. The first cause is seldom met with at the present day. If one compares the pyroxylin as now made with that of twenty years ago one finds good reason to congratulate manufacturers on the progress they have made. The pyroxylin now sold almost invariably gives very tough and resisting films.

"Brittleness arises from an unsuitable proportion of water in the collodion, and the water may be admitted with the alcohol or ether or both. The result is a friable or rotten film, the exact character of which depends to a great extent upon the methods of the operator. The film tends to become more and more friable the longer one waits before dipping the collodionized plate into the silver bath.

"A more usual cause of a film, not necessarily rotten, leaving the glass is insufficient means of causing its adherence. The several substrata are very different in their properties. Good collodion will frequently stick to a well-cleaned glass plate without any preparation whatever, or it is often sufficient to edge the plate with rubber solution to produce a completely adherent film. Even with bad cleaning and unsuitable collodion a proper adherence can be obtained with a rubber-prepared plate. A very convenient method of preparing the rubber solution is to dilute the ordinary cyclist's solution with

twenty to forty times its volume of pure benzole. This preparation is preferable to a gelatine substratum under all circumstances. There are brands of gelatine which, when in such thin films as are suitable for this purpose, are completely soluble in cold water. The result of such preparation is naturally the separation of the film. Tanning agents, such as chrome alum, overcome the difficulty only to a slight degree in many cases. It is therefore advisable, if gelatine is to be used, to employ a very hard brand in not too thin solution. The following formula gives excellent results with wet collodion as well as with collodion emulsion: Hard cooking gelatine (30 gms. or 1 oz.) is put in water to swell, and then dissolved in hot water (3000 c.c. or 105 oz.); 50 c.c. ($1\frac{3}{4}$ oz.) of a 1 per cent chrome alum solution (previously neutralized) is then added. Plates may be given a substratum with this mixture and stored in a cupboard until wanted."

Vignetting Half-Tones

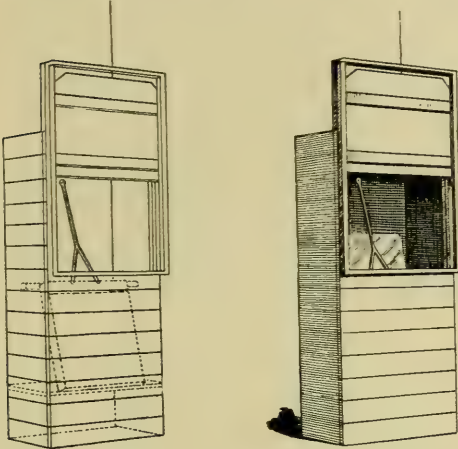
By some engravers the vignetted half-tone is looked upon as a fad and there is no doubt but that the demand for such work is very changeable. But there is no denying the fact that every engraver should know how to make a vignetted half-tone. There are three chief ways of making a vignette. First, by etching; second, by engraving, and third, by working up with the vignetting hammer. Engraving in conjunction with suitable etching is the process most frequently used. As the large establishments employ special engravers, the etcher, as a rule, has little to do. The vignette, however, has certain advantages for quick work, as it is relatively simple to use and gives very passable vignettes in a short time. Of greater interest is the production of a graduated edge by etching. The half-tone is first filled in with chalk. The edges outside the intended vignette are routed or etched away, and fine etching with a brush commenced. The outer edges are done first, the work progressing inward. If the first application is not enough, the process is repeated in like manner. The etching should never go to the extreme of a pin-point dot, as clean printing is thereby rendered more difficult. No vignette that has not a continuous dot formation all through can be made to print well. The edges are usually lowered to facilitate printing.

Suggestions as to Perfecting Lumière's New Method of Heliochromy

In carrying out the stained starch-grain method of MM. Lumière, it may be safely conjectured that the weakest point will be the composite screen, formed of a random mixture of starch-grains, some being stained green, others orange-red, and the remainder blue. A suggestion as to the making of composite glass screen as a more lasting substitute is to be found on p. 126 of *The Amateur Photographer* for August 18th last, the proposal being to use instead of starch-grains a mixture of fragments of suitably colored and highly fusible glass, these being spread on a sheet of more refractory glass, the whole being then subjected to sufficient heat to fuse down the colored grains upon the sheet of colorless glass. A. Haddon, in a private conversation, the substance of which he allows me to disclose, has made suggestions which may go far to bring about the industrial production of the required screens. The three highly fusible glasses, orange-red, blue, and green respectively, would be stamped or crushed, and grains or splinters of the required size separated out by sifting, elutriation, or other mechanical means. The selected grains being mixed in proportion required to produce a neutral tint, a weighed quantity of the mixture would be stirred into a large bulk of water in a tank, on the bottom of which the plates of plain glass must be laid. Under these circumstances there should be, if certain obvious precautions are taken, an even settling down of the mixed grains on the plates, after which the water would have to be very slowly and cautiously drawn off. The plates being now dried and cleaned on the backs, would have to be sufficiently fired in a muffle, to fuse or semi-fuse the colored grains. This glass, gray to the eye, but showing under the microscope as covered with a red, blue, and green granulation, would be the base for an ordinary emulsion. Those wishing to study the general details of the new Lumière method should refer to *The Amateur Photographer* for June 30th last, p. 510; August 4th last, p. 86; and August 18th last, p. 126; and in the last mentioned issue will be found the suggestion for making a permanent tri-color screen of grains of highly fusible colored glass melted upon a base of less fusible glass.—*English Amateur Photographer*.

Cabinet for the Silver Bath

The accompanying cuts give a good idea of the construction of a cabinet for the silver bath that is meeting with great favor in Europe. According to some of the foreign engraving magazines it is in general use in some form. It may seem a little complicated and of doubtful merit to our Western ideas,



but it has certainly met the approval of some of the best workers in the world. The principal idea of the cabinet is cleanliness. The silver bath proper has no lid to collect dust and crystallized chemicals and dump them into the solution every time it is closed. The other idea is economy, for the plate is allowed to drain over the bath before being put into the holder. The doors are of colored glass, so that the operator can leave the room while the different operations are in progress.

Future of Zinc Etching

The well-known writer on photo-engraving subjects, Robert C. Kroll, has the following to say about the future of zinc etching in the *Progressive Printer*:

"Since the appearance of the acid blast etching-machine, much speculation has been indulged in as to the future method of zinc etching. Five years of experimenting, however, has not given any promise of a revolution in this department of photo-engraving; and, unless some marked improvements are made, there is scarcely a possibility of the machine superseding present methods—in commercial work at least. It is true that the increased amount of air striking the plate accelerates the etching qualities of the acid, but, on this very account, the work is invariably undercut. The great fault with the

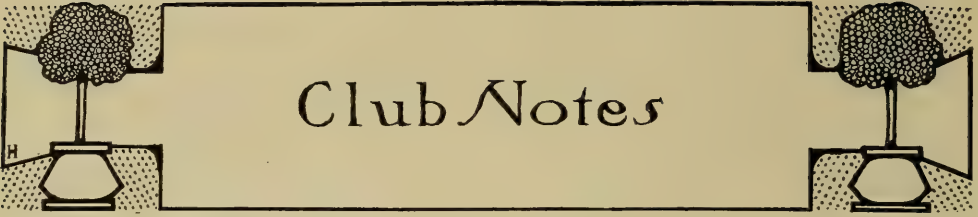
machine-etched half-tones is that—being undercut—they are etched flat, or chewed. Machine-etched line work is most conspicuous for its ragged lines and chewed corners. The machine product, therefore, is unfit for duplication, and certainly not desirable for printing. It might, of course, be argued that this could be overcome by slow etching and careful attention; but if we must eliminate the time-saving features, where is the advantage?"

Women Photo-Engravers

From England comes the news that the ladies are entering the field of photo-engraving (as they have other branches of photography), and have become a problem. Employers and the unions are much concerned over it. I have never heard of a woman photo-engraver in America. I knew of one woman who started to take up the work, but gave it up after a few days when her hands took on the rich engravers' hue that comes from silver, acid, etching-powder, and a few other corrosive chemicals. To my mind this is the one element that has kept women out of the photo-engraving business. A woman will give up a great deal for a livelihood, but few are willing to sacrifice their hands, particularly if they are pretty hands before she begins the work. But the news from England should be carefully watched.

Another Color Sensitizer

Baron von Hubl, one of the leading authorities on three-color photography, recommends highly a new dye called pinaverdol. According to the *Process Photogram*, he says it is an excellent sensitizer and imparts to collodio-bromide of silver a sensitiveness to the orange-green equal to that characteristic of the silver bromide. A mixture of the dye with ethyl violet recommended by Valenta for red sensitizing gives a panchromatic plate, the total sensitiveness of which is four to five times that of a wet collodion plate. A formula recommended by Baron von Hubl is: Pinaverdol (1:500), 70 c.c.; ethyl violet (1:500), 5 c.c.; collodio-bromide emulsion, 1,000 c.c. The formula given by the British agents for pinaverdol (Messrs. Fuerst Brothers, 17 Philpot Lane, E. C.) is as follows: "Dissolve 1 gm. (15 grs.) in 500 c.c. ($\frac{3}{4}$ pint) alcohol and mix 40 c.c. (680 mm.) of this solution with one liter ($1\frac{3}{4}$ pints) bromide of silver collodion emulsion.



Club Notes

News Items From the Various Camera Clubs

By C. A. GOE

C. C. C. Monthly Meeting

The regular meeting of the Club was held on Tuesday, March 14th. The report of the Nominating Committee was submitted.

Following the meeting a fine musical program was rendered, consisting of a Cecilian Recital, together with vocal and instrumental solos.

C. C. C. Annual Pay Exhibition

The Annual Pay Exhibition of the Club was held on Friday evening, the 10th, and as usual was very well attended, although many who are willing to attend the complimentary shows forget to appear at the pay shows. It was a great social and financial success, however, and those who attended were well repaid, for a more interesting program has not been given for a long time than the following:

"A CYCLE OF THE SOUTHWEST"

—o—

PROGRAM

1. Customs, Beliefs and Ceremonials of the Pueblo Indians
Mr. Charles Keeler
2. Home Life, Occupations and Amusements
Rev. Wm. A. Brewer
3. Music: Vocal
a Children's Morning Hymn to the Sun
b Zuni Cradle Song
Mrs. J. H. Schutte
4. Arts and Crafts of the Pueblo Indians
Mr. Fred W. Prince
5. Music: Instrumental
Ghost Dance of the Zunis
Prof. Carlos Troyer, Piano
Mrs. J. R. Gwynn, Violin
Mr. F. H. Coburn, Cymbals
6. Coronado and the Seven Cities of Cibola
Mrs. Frona Waite Coburn
7. The Writer, Artist and Traveler
Mr. Henry Payot

8. Music: Vocal

- a The Sunrise Call
- b Coming of Montezuma
- c The Lover's Blanket Song
(With Slides)
Mrs. J. H. Schutte

9. The Greaser, the Cowboy, and Other Folk Mr. Albert Le Breton

10. The Desert—Its Horrors and Fascinations Mrs. Edward H. Kemp

11. Music: Instrumental

- Kiowa Apache War Dance
Prof. Carlos Troyer, Piano
Mr. F. H. Coburn, Cymbals and Bass Drum

Providence Camera Club

The Providence Camera Club is preparing for its annual exhibition to be held the week of April 10th, and the prospects are that it will contain some of the best work ever hung on the walls of the clubrooms. The Club is famous for its good photography the country over, members having taken prizes at the exhibitions of other clubs in previous years, and but a few weeks ago being awarded eight of fourteen prizes offered by the New England Photographic Exchange.

The highest honors ever given to the Club, was the hanging of work by its members at the First American Salon; and the award of the gold, silver, and bronze medals at the recent St. Louis Exposition to the Rhode Island Photographic Association, which was formed largely of members of the Providence Camera Club.

The new President of the Club, Henry J. Reynolds, is actively promoting its interests, and is being aided by his committees, and by the early spring it is expected that the Club will be at the top notch of prosperity. It is proposed to make the Club the center of the photographic art in Rhode Island, as it can and should be.



California Camera Club

The Club has always claimed the distinction of being one of the largest if not the largest Camera Club in this country, and it can certainly now add to that the claim of having the very finest rooms of any similar club. Within the last two weeks the Club has expended a large sum of money in purchasing new furniture, carpet, curtains and everything which goes to make an attractive lounging room for its members. Fitted in Old Mission style furniture, the walls covered with burlap and a rich red carpet to offset

them, there is a warmth and comfort in the rooms that it attracting the members and you find many of them comfortably settled in the large chairs. It is one of the good things the present Board of Directors put through, and the Special Committee appointed by the President deserves much credit for the careful and appropriate manner in which they have fitted up the rooms. The illustrations herewith show the interior of the main or assembly room which is also used for exhibitions and as a reading and lounging room for the members and their friends.



Exhibition of the Brooklyn Camera Club

The Brooklyn Camera Club held its annual exhibition at its rooms, 776 Manhattan Avenue, Brooklyn, on the evenings of February 15th, 16th, 17th and 18th, and was the most successful exhibition ever given by this well-known and popular club. The competition was open to amateurs and professionals, and entries were received from all over the country. About four hundred prints were received, of which one hundred and fifty were hung. The decorations were of green burlap, and the frames were very artistically hung. The judges were Rudolf Eickemeyer, Frederick Kost and Curtis Bell, and their selections for awards were universally approved. The following were the awards: President's cup, to James E. Underhill, for his marine study, "August Morning,"

which was selected as the best picture in the exhibit. In the genre class the first award (silver medal) to Meyers R. Jones for his "Dutch Women." Second award (bronze medal) to William H. Zerbe for his "The End of a Day of Toil," and honorable mention was given to Alexander S. Ingram for his "Sheep Study." Landscape class, first award (silver medal) to Gustave F. Swenson for his "Snow Drifts." Second award (bronze medal) to William T. Knox for his picture, "The Brook." Mr. Knox received honorable mention in this class for a "Landscape Study." In the marine class (silver medal) James E. Underhill was awarded this prize for the same picture that received the President's award. In the portrait class W. B. Brodhum received first and third award, and the second award went to Edwin O. Torbohm.

Another Letter to the Editor

DEAR MR. CLUTE: Replying to your note suggesting that I make some reply to the letter from Mr. Rubincam, in order that you may close the discussion in the coming issue, I would say: It appears to me that the motives of the writer are so evident that they can scarcely be misunderstood by thinking people. At the same time, our organization is now on so high a plane that it need scarcely give any attention to the ill-natured remarks which are being made, and which, I suppose, will continue to be made from time to time. Nevertheless, in order to keep ourselves right before any persons who might be disposed to regard these various insinuations as being true, it may be best to answer them as briefly and straightforwardly as possible. I shall therefore repeat some of these statements and then give the answers just as if they really were questions asked in good faith and for the purpose of obtaining definite information. Mr. Rubincam's statements are these:

1. He proposes to advise photographers of deceptions which he alleges have been practiced against them.

2. That magazines refusing to print the letter "stand convicted" of selfish interest and that they sacrifice all right to contend that they stand for the advancement of photography.

3. That the First American Salon from the first, associated itself with influences opposed to the Photo-Secession.

4. That every photographic interest *but one* in this country and Europe was propitiated by the Committee.

5. That advantage was taken of every opportunity to sneer at and condemn the Secession.

6. That the management was not pursuing a course which guaranteed fairness and freedom from prejudice.

7. That *the Europeans* had been told that their exhibits would be *hors de concours* in spite of the assurance that all prints must pass the jury.

8. That it was felt that there was a lack of sincerity, a lack of purpose, and a lack of ability that boded ill for photography.

9. That the Photo-Secession stands not for itself, nor for its officers and members, but for photography.

10. That Mr. Hartmann sent letters to Europeans, inviting them to send exhibits *hors de concours*, and that these letters were written under the direction of the Metropolitan Camera Club.

11. That the President of the Salon stated that he and another would select certain prints to be submitted to the jury.

12. That there was a very "suspicious

New York, June 30th. 1904.

Gehr Geehrter Herr:-

Ihre Arbeiten sind mir durch Reproductionen in verschiedenen Jahrbüchern und Monatsheften vorwiegend bekannt. Da wir nun im December eine internationale photographische Ausstellung in New York veranstalten (diese Ausstellung soll auch in den folgenden Monaten in Chicago, Washington und Boston ausgestellt werden) so laden wir Sie herzlich ein, sich darauf, das sich Deutschland und Oesterreich in dieser Ausstellung auf dieselben vertreten sein möchten.

Der 'Salon Club of America' welcher die Ausstellung arrangirt, hat mich ersucht eine Anzahl der bedeutendsten Europäischen Kunstphotographen vor diesem Unternehmen zu bewerblichigen, und ich stelle mir daher die Anfrage an Sie zu richten, ob Sie unsere Ausstellung mit einigen Ihrer besten Arbeiten beehren würden.

Alle Bilder können ohne Rahmen geschickt werden, da der Salon Club, gemeinsam mit den New-Yorker Camera Club die Unkosten des Einrahmens von allen Bildern übernommen hat.

Die Deutschen und Oesterreichischen Bilder werden in besonderen Gruppen zusammengehangt werden. Die Aufwählende Jury besteht aus hervorragenden Vertretern der Kunst, ist mir mitgetheilt das man Ihre Arbeiten als Hauptmomente betrachten werde. Dem Verkauf der Bilder wird diesmal besondere Sorgfalt gewidmet werden, und wir hoffen das die Ausstellung, auch in dieser Hinsicht einen grossen Erfolg verzeichnen wird.

Ausstellung Prospectus wird hiermit unter besonderen Couvert geschickt.

Mit verzueglischer Hochachtung,

Rückert

Sadokch. Hartmann

"Midway Altan"

Phot. Club of America Committee.

abundance" of names previously known through minor exhibitions and competitions.

13. That Mr. Bell repudiated Mr. Hartmann and his letters.

14. That the plan had been changed, and that all prints would go before the jury.

15. That the "minor photographers" were lauded by the critics as the true pictorialists.

16. That Mr. Kost, a member of the jury, said that it would be impossible for the jury to look over the 9,000 pictures.

17. That nevertheless Mr. Bell stated that every entry was submitted to the jury.

18. That Mr. Kost, member of the jury, stated that the jury did not consider "any of the photographs" to be "works of art," and that they were all surprised to find so much ignorance of art principles so generally displayed.

19. That he refrained from comment on the position of the management of the Salon.

I will take up all these statements in order, as briefly as possible, as it is probable that your readers and photographers generally are heartily sick of all of these attacks and insinuations.

All of these arguments, when carefully read, really refute and contradict one another, in addition to which they are largely built upon a misinterpretation of facts, to use the mildest possible word. The answers, then, are as follows:

1. No deceptions of any kind were practiced upon photographers or upon any photographer or person.

2. The argument as to magazines "standing convicted" speaks for itself.

3. The First American Salon was a new and independent movement.

4. I do not know to what extent it was necessary to "propitiate the Photo-Secession,"

but I know that every member of it who is known as having work exhibited at photographic salons had one of the invitations to contribute to the Salon mailed to him. Further information on this subject will be given later.

5. The policy of "sneering and condemning," if it existed, was started by the Secession itself in its leader's pronouncement against the First American Salon.

6. There is no proof that the management failed to pursue a fair and unprejudiced method in any and every detail, and the contrary is the truth.

7. If Europeans were told that, contrary to all of the regulations of the Salon, their work would be exhibited without examination by the jury, they were misinformed.

8. There was, and is, no lack of sincerity, purpose, or ability; and the reverse of this has been fully demonstrated.

9. Public opinion may decide whether the Secession stands for itself and its leaders or not.

10 and 13. It is very well known that the letters written by Mr. Hartmann were in the German language, and if they contained promises that any work would be exhibited *hors de concours* the officers of the Salon had no means of knowing it. The regulations for the Salon were well known to him and to every one. It would really be interesting to have one of these letters published, although even that would not show that such statement, if true, was by authority of the Salon management.

11, 14, 16, and 17. Referring to a thing which is very well known by the writer and others, that the jury having stated that it would be impossible to examine 9,000 prints, a first selection was made, after which it was considered necessary to have everything examined, and this was done at the second and third sessions of the jury, within a few days after the first selecting.

12 and 15. The fact that many new names appeared in the Salon list is the clearest proof of the fairness of the Salon management in giving an equal opportunity to every one whose work was worthy.

18. Undoubtedly the jury would have found much that was unworthy of consideration among the enormous quantity of work submitted, but I do not believe that Mr. Kost was correctly quoted in making the obviously erroneous statement that all of the

photographs showed ignorance of the principles of art. On the contrary, photography and photographers have done much to aid and even to educate painters in their work.

Immediately after the announcement of the Salon, a proposition was made to the effect that if the Secession were invited to enter its prints without examination by the jury, it would exhibit at the Salon on that basis. The question was asked what should be done with the Salon Club, an important society which was associated in this movement. The reply was that it would be satisfactory to have the Salon Club also, hang its work in the Salon on the same basis as the Secession. This proposition was refused for the reason that it had been distinctly understood from the outset that not one print should be exhibited except through the jury, and that it would be impossible to break the rule either for the Secession or for the Salon Club.

I cannot imagine how the Secession expects to advance pictorial photography by its continual attacks and fault-finding, and I think that other pictorialists than the Secession have the right to have their work exhibited, where worthy, and also that the public has the right to see all of the best work that the independent pictorialists of the country are doing. The Salon and the method of conducting it are the fullest possible demonstrations of the fairness and unselfishness of its leaders.

Very truly yours,

WALTER ZIMMERMAN.

First Vice-president, American Federation of Photographic Societies.

PS. Since writing the above I have asked Mr. Bell whether he had anything to add and he sent me the following:

Item 7. Up to this moment I have never been able to see one such letter; but, if Mr. Hartmann's letter to 75 German and Austrian workers, written in German (*which neither Mr. Bullenkamp nor I can read*), did contain such an offer it was absolutely without authority.

Item 18. Mr. Kost and all of the other members of the jury complimented me on the unexpectedly high quality of the Salon and stated that it was the finest photographic work that they had ever seen.

NOTE: One of the letters in question is reproduced herewith.—*Editor CAMERA CRAFT.*



Notes and Comment



Talking About Photo Lenses

L. M. Kaiser, the popular member of the well-known firm of Hirsch & Kaiser of this city, who is now in the East, sent us a two-column report of a three-days' conference of dealers from all parts of the country held at the plant of the Bausch & Lomb Company. Mr. Kaiser was in attendance and reports a most interesting and enjoyable session. I clip the following from the report which he so kindly sent:

"More than seventy-five photographic dealers from other cities are in conference at the plant of the Bausch & Lomb Optical Company on St. Paul Street. This is the first Convention of its kind ever held in the United States and is unique in many of its features. Dealers are present from as far north as Ottawa, as far south as Atlanta, as far west as San Francisco and as far east as Portland, Maine.

"The conference," said one of those in attendance yesterday, 'was called at the invitation of the Bausch & Lomb Company. The development of photographic lenses and the consequent rapid growth of the photographic business have created new conditions with which many dealers have had but little opportunity to familiarize themselves. The literature extant takes no cognizance of these conditions and is inadequate to give a comprehensive view of the various phases of the subject. Believing that this information could be acquired in no other way, and that it would prove both helpful and stimulating, the Bausch & Lomb Company invited the photographic dealers to be its guests. We intend to study the various processes involved in the manufacture of lenses and shutters, have practical talks and demonstrations and become better acquainted in a social way.'

"Some of the guests arrived Sunday night and were met at the Powers Hotel by representatives of the Rochester firm. Yesterday morning they assembled in the new building of the plant on St. Paul Street, and listened to an address of welcome by Edward

Bausch, who presented the visitors to J. J. Bausch, President of the Company. An informal reception followed.

"The afternoon was spent in inspecting the factory and studying the processes of manufacture of lenses and shutters. The formal sessions of the conference will be begun today and will continue tomorrow. S. Lawrence will give a talk on 'The Natures and Use of Photographic Lenses.' He will discuss the optical properties, the various types and the adaptability of different purposes. The talk will be illustrated with lantern views.

"Other addresses scheduled are as follows: 'The Anastigmat as Compared with Other Lenses,' by J. Hammele; 'From the Purely Commercial Standpoint,' W. M. Moore; 'Advertising; How It Helps the Dealer,' L. B. Elliott.

"George Eastman has invited the men in attendance at the conference to be his guests on Thursday."

The Nichols' Portrait Flash-Lamp as a Paying Investment

We are in receipt of circulars describing this most thoroughly practical Flashlight Machine in detail, the manner of its construction and operation. Before making an outlay of fifteen dollars you very naturally want some idea of its capabilities and earning power.

For an example of every-day-utility, attention is called to a series of eight half-tone reproductions, from bona-fide, flashlight negatives, expressly made to show how perfectly any of the various lighting effects in daily use may be produced. To the progressive man this means an increase in the number of his sittings—and his income.

Many photographers, who a year ago never attempted to make a group or baby negative larger than cabinet size unless the light happened to be just right, are now making with this lamp negatives up to the size

limit of their cameras, regardless of daylight. They are accommodating their customers by giving them sittings at all times, regardless of light and weather conditions, even going to their homes and giving them a grade of work absolutely as high as they could produce under their skylight under the most favorable conditions. They are making sittings of parties, wedding groups, etc., in private houses that previously never could have been made, and many are making genre negatives that before were impossible to produce, and which find a ready market among the art dealers at good figures.

These are but a few instances, taken from the many hundred users of the Nichols' Portrait Flash-lamp throughout the country and is ample evidence that this valuable outfit stands today the greatest money maker for any and every photographer.

Stop a moment and consider the unlimited possibilities for increasing your trade; consider the advantage of being independent of daylight, and consider the returns you can get from an investment of but fifteen dollars.

The booklet, "The Flash-lamp as a Substitute for Daylight," accompanying each outfit gives minute instruction of how to make all of the effects shown on this page, together with much other valuable information on flashlight photography in general, and insures success for every purchaser from the start.

California College of Photography News

The new addition of instruction books in the correspondence course in Commercial Photography has just come from the press. These books not only contain an ideal course of instruction, but they are fully illustrated with half-tones from ideal prints. This course is the most popular that has ever been placed at the disposal of the amateur, training him to make better pictures but also teaching him how to dispose of his work at a good price. An advertisement of this course will be found on another page of this issue. It will pay every amateur to investigate, whether he enrolls or not.

R. J. Peterson of the American Aristotype Company gave a very instructive demonstration on Aristo Paper, methods of backing, and the like, on the 15th of February.

The College Cycling Club improve their time Saturdays touring the country and making pictures of our beautiful Californian

scenery. The well-kept roads, always oiled or sprinkled, make it possible to enjoy the bay, the lakes, the streams, the woods, and the mountains to a greater extent than if located elsewhere. California is known the world over for its beautiful scenery. Palo Alto is located in the center of this garden spot, having in addition to the scenery the most ideal and healthful climate in the United States.

Mr. Telgmann, of the firm of Telgmann & Torka, manufacturers of scientific instruments, San Francisco, made us a visit the first of this month, giving us many helpful ideas regarding the construction and use of photographic lenses.

Although February was a short month we take pleasure in announcing the enrolment of eleven new students. This goes to prove that a Photographic College on the Pacific Coast is not only what the Western people want, but is appreciated by those in the East, as well. By coming here, they can improve their time studying the most fascinating of all professions and enjoying California to the fullest extent as well.

An important addition was made this month in the Department of Printing in the form of a Manufacturer's Card-cutter, made by the Milton Bradley Company of Springfield, Massachusetts. The students in this department, especially, can be thankful that they are in California where the sun shines from one month's end to the next, where rain and snow are almost unknown.

Still another addition has been made to the Faculty of the California College of Photography; this time in the Department of Retouching. President Dudley has secured Mrs. Julia C. Rockett of San Francisco, an artist of ability, who will take charge of this important branch of the photographic work. Having for years been head retoucher in prominent studios, such as Taber's, Thors', and the like. She is eminently fitted to instruct in this branch of the profession. Not only is she an expert with the pencil but her work in miniature painting and coloring of photographs cannot be excelled. Her enlargements in water colors and crayons are gems of art. The College has been very fortunate in securing her services, offering as they do a rare chance for those wishing to become thoroughly competent in these lines of work to do so by enrolling at the College. Now is the time to take up your study, write to the College for full particulars regarding

any part of the work you are interested in, also for their illustrated catalogue.

A one-hundred-dollar cash prize is offered by the College management for the best commercial photographs for advertising purposes. If you are an amateur you should be interested enough to write for particulars. Address all correspondence to the College at Palo Alto, California.

Naturalistic Photography

We should like to call our readers' special attention to a recent publication, "Photography for the Sportsman—Naturalist," by L. W. Brownell, which we feel quite sure you will be glad to know of, in order that you may become one of its appreciative readers—it being both an interesting and instructive volume. This book is one of some three hundred pages, with over eighty illustrations, and takes in the "Photography of Animals, Wild Flowers, Trees, and so forth," and although a volume in the American Sportsman's Library, it is sold separately—the price being two dollars net, postage twenty-one cents. It can be ordered of Camera Craft Publishing Company or of the publishers, Macmillan Company, 66 Fifth Avenue, New York.

Correspondence Teaching

Correspondence teaching is the most effective means whereby that large class of aspiring persons who are beyond the range of regular college influence, yet who have a few spare hours which they would gladly devote to home study, can obtain the benefits of our great colleges and technical schools. Many of these people are too old to go to a regular school; some are too busy; and a larger number have not the means. The busy class will find that an hour devoted to study under proper direction, will do much to keep them up with the advancements that are continually being made, as well as broaden their minds and increase their knowledge. Those people who are unable to afford a course at a resident school constitute a vast army of intelligent, ambitious young persons to whom a thorough training in some particular branch of industry would mean sure and rapid advancement. It was to extend to these classes some of the benefits of our great colleges and technical schools that the Correspondence Departments were founded in

connection with the California College of Photography, Palo Alto, California.

Further, correspondence instruction offers parents who have not the means to send their children to a photographic college an opportunity to obtain for them a certain amount of theoretical and practical training at a moderate cost under the direction of men of acknowledged standing and experience.

Successful correspondence teaching is that which places the student under the same instructors and methods which have proved most effective in our great residence schools. Where this is done correspondence work is brought into accord with resident college teaching, and when the student applies himself to this form of study he will make a success of the work he takes up. Correspondence students are taught under the supervision of the men who preside over the laboratories and teach the classes of the California College of Photography. Write to them at Palo Alto, California, and find out how interesting their plan is.

An Adventure in Modern Photography

Hunting and fishing have their moments of intense excitement. Occasionally I like to go back to the more primitive way by taking to the trail for two or three weeks, and hunting and fishing for a living. It sharpens the senses to live as the Indian lived. I have waded mountain streams and whipped the ripples for trout. I have hunted the woods for a dinner of grouse and quail. There is not a moment of more intense excitement that comes to the fisher or hunter than comes to the photographer as he lies hidden in the bushes, camera focused and bulb in hand, waiting for some sly creature to come into position. I am inclined to think that a capture with the camera puts his cunning to a severer test and denotes a higher development in his inherent love for hunting. If it takes a fine shot to clip the wing of a flying quail, or to catch a buck on the jump, it takes a skilled hand to anticipate bird movements that are too rapid for the eye, and click the shutter at the exact instant. It often takes unlimited patience; but there is a fascination in overcoming the many difficulties and securing good results. There is a smile of deep satisfaction that sweeps over the face of the photographer as he stands over the dim, red-lighted bench and see the magic

chemicals transform the white-colored glass and etch out a wild bird or a beach. There is a feeling of higher pleasure that never comes to the hunter when looking at his quarry.

One who has not visited a bird metropolis by the sea and climbed the rocky ledges of the cliff can have no conception of the thousands and thousands of feathered inhabitants. When we first approached the rock it looked more like a gigantic beehive that had been disturbed, for the feathered swarms crowded the sky in every direction. It was the sight of a lifetime. Myriads of white-breasted murre circled in the air above or crowded the ledges in shoals. Retinues of pug-nosed puffins, or sea-parrots, buzzed about. Gaunt cormorants flapped back and forth in Indian fashion or stood like black guards beside their nest and eggs. Flocks of snowy gulls hovered in the air and followed in our wake.

The real value of photography is that it records the truth. The person who photographs birds successfully must study his subjects long and carefully. He is not likely, therefore, to get only a scanty set of notes and be compelled to complete his observations when he is seated in the comfortable chair of his study. For this reason a camera in the hands of some of the recent nature writers would be of great value to science, if they could picture some of the humanized habits of creatures they have described with the pen. Of course, in the study of art, we may try to improve on nature, but in nature study truth is the important element. We might as well understand that a beast or bird is interesting because of its own wild individuality, not because it is a man dressed in fur or feathers.—*The Pacific Monthly*.

Our Cover Next Month

This is reproduced from a photograph taken of a prize-winning stage setting, arranged for friendly competition of the merchants and manufacturers of Los Angeles. This was the exhibit of the Cawston ostrich farm of South Pasadena, situated but a short ride on the electric cars from Los Angeles, running every fifteen minutes, bringing people from Los Angeles and Pasadena. No more pleasant outing can be taken than a trip through the suburbs of either city. The entrance is through the salesroom, where are exhibited thousands of dollars worth of the most beautiful ostrich feathers. Ladies

are always greatly interested in this display. Proceeding into the grounds made attractive by the landscape gardener, the little week-old birds first attract the eye, then the drove of young adult birds running in the large paddock; then the families of older ostriches with their curious nests filled with large eggs which they guard with jealous care; finally the pens of mating ostriches and the troops of juvenile birds, cared for, for five years before they arrive at the age of discretion. Altogether no more interesting sight in California can be seen. Attendants are always on hand to conduct visitors through the farm. Mr. Cawston first introduced ostrich farming in America and secured his original stock by going direct to Africa, where he procured a flock of fifty birds and shipped them to Southern California. This was seventeen years ago and nearly all of the original stock has disappeared from the farm. At different times other birds have been imported, thus crossing the strains and improving the stock. By careful nurturing, regular feeding and proper breeding Mr. Cawston has developed the finest birds on earth. They are not only the largest, but are the most vigorous and produce the finest quality of feathers.

The New Century Catalogue

The 1905 Century Catalogue is now ready for distribution. With all due respect to former issues we must say that this is the best of a long series of fine catalogues that these makers of fine cameras have ever issued. New models are shown and improvements illustrated and explained. Write the Century Camera Company, Rochester, New York, and get one of these beautiful productions listing a handsome line of cameras.

The Century Cameras have, from the first, enjoyed a popularity unprecedented in the history of camera construction. The word Century has so long been associated with sound construction, practical designing and the best of material, that what we might say in the praise of these goods would seem well-nigh superficial. Used by the best workers and by them found to meet every requirement, the prospective purchaser need have no fear that his wants and expectations will not be fully met by one of these cameras. The line includes a large variety and one that should admit of a choice being made of one suitable to any requirement or limitation imposed by the purse or the desire of the buyer.

CAMERA CRAFT



San Francisco, California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CALIFORNIA



A PEACEFUL VALLEY
by W. H. PORTERFIELD
First American Photographic Salon



VOL. X

SAN FRANCISCO, CALIFORNIA, MAY, 1905

No. 5

Photographic Enlarging for Expert Amateurs

By WALTER ZIMMERMAN

Enlarging is an advanced form of photographic picture-making which is worthy of the most careful attention of the expert amateur, and the amateur who strives to become expert. If the original picture is good, the skilfully enlarged representation of it is vastly more valuable. There are many photographic pictures which are scarcely looked at in their original form, but which become masterpieces when produced on a larger scale. Many noted "professional amateurs" owe their success in exhibitions, and the sale of their pictures at good prices, to their success in doing large work well. Many a pictorialist has artistic bits which practically receive no consideration for the reason that the negatives containing them are either very small, or else that the pictorial part is a small section. An original negative may contain a number of subjects of diverse interest, which would jar on one another if the whole print were offered for exhibition, while an enlargement of a section would make a picture.

This is also the day for the improved negative. Painters interpose objections against modified negatives, but photographic pictorialists approve of manipulation with, perhaps, not a dissenting vote. Without attempting to debate this question in the present article, let it be merely said that it is usually impossible for a photographer to control all of the conditions of light and shadow in making an out-of-door negative. In order to obtain artistic results, it is necessary for him subsequently to make changes to produce the right effect. This is obtained in the enlarging process better than in the original negative; for there are three steps by which he may make his needed improvements; first, in the original, second, in the positive, and third, in the final negative. This, of course, refers to the making of the negative enlargements, although making paper enlargements gives considerable opportunity also. I will, during these articles, give the ordinary methods of making negative enlargements, and also a simple and very curious method of my own, by which the very best plates for exhibition printing may be easily made. When well done, enlarging displaces the clumsy telephoto outfit, and the results are equally good. Direct enlargements on paper have the disadvantage of lacking

variety in tone and effect, although there is much larger scope in direct enlargement than is generally supposed.

Presuming, then, that the reader is interested in the larger photography, let us take up the apparatus required for obtaining the best results simply, and with the least possible expense. In the first place, let us dismiss from our consideration the ready-made enlarging apparatus, which gives enlargements from one fixed size to another fixed size, and which does not usually admit of using a portion of a negative. The enlarging box has also the disadvantage of being unsuited for the most artistic work, as the projected image is covered in the enlarging camera, making it impracticable to force the denser parts or to hold back the weaker parts of the original negative successfully. Of course, where the facilities to be described are unobtainable the enlarging box is useful, but it is not my intention in this article to refer to it further. By using the apparatus which I will describe, the photographer will be enabled to see the enlarged image projected before him, and will learn what exposure to give to the negative, or to any portion of it through seeing that image. Outside of devoting a room to it, which might, in fact, be the dark room itself, the cost of the better method is not very much greater, for the apparatus can be made by any carpenter, or by the operator himself, if he be able to use tools. On the other hand, there is a saving, on account of the worker using his own lens and camera, as will be explained. The method to be described is absolutely under the operator's control, and with careful handling, he may practically produce anything in the way of large pictures that he may desire. The expense of the daylight outfit to be described, including carpenter's work, is about twenty-five dollars. There are two classes of illumination for the projected image, artificial light and daylight. My own professional outfit for enlarging on plate or paper is for daylight, which has been eminently satisfactory. It is that which shall receive the principal consideration in these articles, so that references to artificial lighting will be first in order, and brief.

Artificial light for enlarging purposes should be as strong as possible and constant. The best and simplest is the electric arc. In purchasing an arc light, that which gives the long arc is by far the best, as the illumination is more intense and of violet color, which has the greatest actinic power. The electric light should be shut off after each exposure, to avoid heating the camera needlessly, and as a matter of economy. The handle and switch should be insulated to avoid shock. Short pieces of carbon should always be removed, as, when burned out, at either end, the apparatus is injured by continuing the current. Another means of illumination is the incandescent gaslight, which is comparatively hot, weak, and burns up the oxygen of the workroom, unless it is specially ventilated. There is also a triple incandescent gaslight, which is often troublesome.

The outfit needed for enlarging by artificial light consists in a large light-tight box, with a door for access to the light, and a chimney, and air supply, if gas be used; a slide, with kits for negatives of various sizes, a pair of good condensers of a diameter larger than the diagonal line of the largest sized negative which will be used; a first-class lens, with adjustable diaphragm; and a board for the projected image. The lens must be furnished with a bellows and rack and pinion, for use in focusing. The light box or camera may have an opening to fit one's own camera if it have a first-class lens. The distance from the lens to the



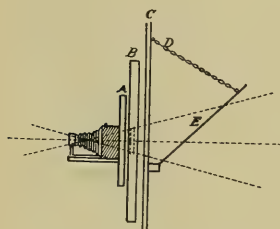
GIRL WITH MAGNOLIA
by F. E. MONTEVERDE

negative will be the focal length of the lens, a reversal of the use of the lens as applied to studio and out-of-door photography, in which the subject is large and the image small. The lens should be of such good construction that it will project a perfect image with the diaphragm wide open, admitting the greatest possible illumination, when required, such as for large images or for dense negatives.

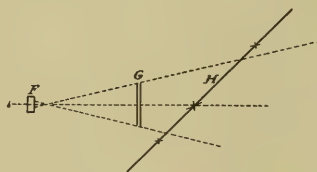
Enlarging by artificial light has several advantages: use at any time, day or night; uniformity of illumination, and the enlarging outfit may be built in any part of the house, or even in the cellar, for that matter. It has the disadvantages of requiring expensive condensers; the cost and heat of the light; the greater liability of the light getting out of order; and the possibility of shock or fire.

The special object of this article is to describe the use of daylight, and the very simple apparatus needed. Condensers and the large box for the light are not needed with a daylight outfit; and if space be limited, the room may be shorter by several feet. One's own lens and camera may be used better with daylight than with artificial light, as the former is stronger.

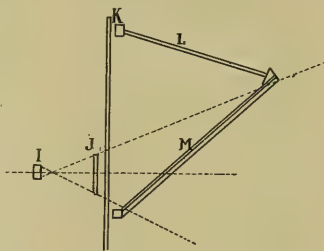
The daylight enlarging apparatus should, if possible, be in a room with a window facing the north, in order that the sun will not shine into the window. If a north room is impracticable, then with an east window, the operator must work



ENLARGING WINDOW WITH
PAINTED REFLECTOR
A, swing board; B, negative
holder; C, window; D, chain
to window frame; E, reflector.



MEASUREMENTS FOR REFLECTOR
F, lens; G, ground glass;
H, cord.



FRAME FOR MIRROR
I, lens; J, negative; K, win-
dow; L, plate glass; M, mir-
ror frame.

after midday, and, with a west window, he must work during mornings only, except in cloudy weather. The sun produces an uneven illumination, by shining into the window-box, or on the negative, often causing streaks. The window should be free from an overhanging tree or other obstruction to the evenness of light. It may be on any floor of the house, but, if on the top floor, with a large overhanging cornice, the apparatus should be built out to the distance which the cornice projects from the building.

The outfit needed for a first-class daylight enlarging apparatus should consist of the following: A reflector; a board, extending across the window, with an opening to hold the kits; an opaque window-shade, on a spring roller; a set of kits for negatives, including all sizes which may be used; a swing-board, to hold the camera; a cap, for lens, with orange glass or celluloid; glass headed pins to hold plate or paper in place; an upright, movable board, for the paper or plate; a tank and running water; a tray for each of the sizes of paper or plates to be used; means of entering and leaving the room without admitting light.

All of this will now be described and illustrated: The method of using the outfit is this: the light of the sky falls upon the reflector, passes through the

negative, is diffracted by the lens, and is projected on the sensitive material fastened to the screen.

The reflector may, in its simplest form, be a board painted white or with aluminum paint, large enough to project rays of light through every part of the largest negative to be used. (Sketch No. 1.) The board should be securely fastened to the window-sill, with or without hinges, and should project upward at an angle of about forty-five degrees. A more obtuse angle to the wall gives greater illumination and requires a longer board; a more acute angle gives less light, and the board would be shorter. The upper corners should be supported from the window-frame by chains. An opening should be left for snow and rain to pass through.

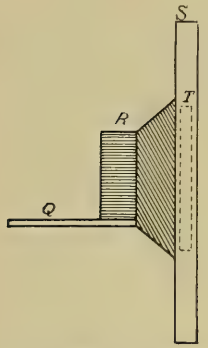
Hang a piece of paper the size of the largest enlargement that will be wanted, and focus it with your camera. Three or four inches back of the ground glass attach a cord, suspending it upward and away from the lens at an angle of forty-five degrees. With a straight stick, or another cord, make a line from the *bottom* of the lens to the *top* of the ground glass and continue the line until it crosses the suspended cord. This will show the length required for the reflector. A similar line from one side of the lens to the opposite side of the ground glass, continued to the plane of the cord, will show the width of the reflector. (Sketch No. 2.) The length of the reflector above the optical center is greater than that below the center. This explanation is important, for the reason that the board is usually *centered* to the lens, which makes the reflector too short, causing defective illumination.

This careful measuring is particularly necessary with a mirror, in which a mistake would be costly. It might be possible to suspend a mirror well backed and well puttied, so that it will be reasonably safe from injury by the weather, but a much better plan is to have a box built for it. The mirror has the great advantage over the board of giving much stronger illumination.

In using a mirror, it is additionally necessary to take a projecting cornice of the house into consideration. Such a cornice would cast a shadow through part of the negative. One remedy would be to hang the reflector beyond the line of the cornice, and another would be to change the angle of the glass. An angle of from forty degrees to fifty degrees would probably be safe. Lowering the angle or placing the mirror out from the house would make a larger mirror necessary, as will be ascertained in measuring by means of the lens and cord. On account of the various focal lengths of lenses, and the varying sizes of enlargements which will be required by the readers, no measurements to suit all cases could possibly be given here. It is therefore better to take the trouble to measure than to have the reflector too small or needlessly large. I find, upon testing the drawings for this article, that a short focus lens takes the rays at such an angle as to cause reflection from part of the house when the mirror is placed at an angle of forty-five degrees. With such a lens, it would therefore be necessary to place the mirror at forty degrees in order to prevent this.

Now for the construction of the mirror box. (Sketch No. 3.) It should be enclosed at the sides and bottom with a strong beveled frame at the top for a piece of plate glass to keep out dust, rain and snow. The glass may be measured between perpendicular lines from the mirror at its angle. The front of the box, next to the window, may be left open, or it may be enclosed except for an opening larger

than the largest negative to be used. The mirror-box must, of course, be absolutely water-tight, and strong enough to bear the force of the wind; it should be securely fastened to the window-frame. The plate glass at the top should be on a slant, in order that its effectiveness may not be destroyed by the rain and snow. The latter may also be cleared off by opening the upper sash of the window.



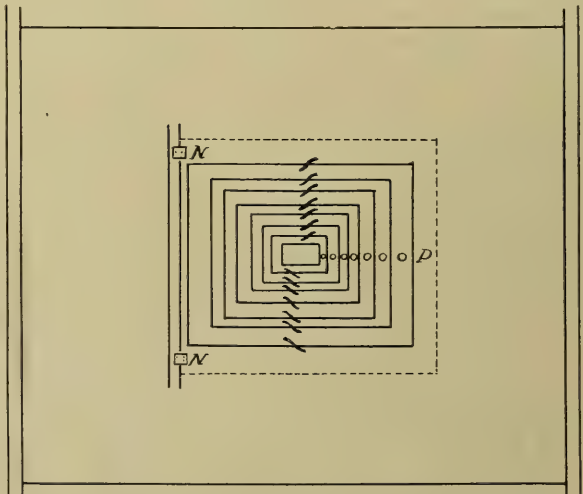
SIDE VIEW OF EXTENSION FOR LARGER NEGATIVE

Q, rest for camera; R, camera; S, window board; T, negative.

By far the worst of the trouble is now provided for. The next thing is the board to keep the negatives in place. This board should extend across the lower part of the window, and should be screwed to the frame. The width will be fully twice that of the largest negative to be used for enlarging, and an opening will be made to hold the set of kits, the largest of which is to be riveted in place. The center of the opening should be a horizontal line through the center of the lens. The position of the reflector is fixed by the window-sill so that no arbitrary height may be given here. If you refer to sketch No. 2, the height of lens and, therefore, of the center of negative will be understood. While not centered as to height of the reflector, the opening will be centered as to its width. An opaque window-shade, on a spring-roller (instead of having the window entirely boarded up), will enable the window to be opened, admit light and ventilation, and facilitate cleaning the reflector or the plate glass. Strips of board should fit close to the shade, to keep out light at the sides. There may also be a second window-shade, of red, on a spring-roller, to be used separately, giving a safe red light while working, if desired.

Your supply house can obtain the set of kits for you, and they will be better and cheaper than if you try to make them. They are openings with spring-clips for negatives and are made from lantern-slide size up to 14x17 inches or even larger. If you only want up to 8x10, order all up to that size. All are fitted accurately into one another, and they are all on the same plane.

If you intend using your own camera, have a board made, with an opening and a rest, to fit and hold the camera. It will swing side-ways on hinges and have a turnbuckle to keep it firmly in place while in use. The swing-board will be larger than the opening for kits, overlapping it, so as not to allow any light to enter, except through the lens. Sketch No. 4 shows the opening to hold the camera and the shelf for it to rest upon. In making *small* enlargements, that is, a trifle larger than the original, a long draw will be needed. If your camera does not have



FRONT VIEW OF WINDOW BOARD, SWING BOARD AND KITS
N, N, hinges; O, O, O, O, O, O, O, kits; P, swing board

a long bellows, then instead of a mere opening, have a box for four sides, exactly holding the camera, built for such a width or distance from the negative as will be equivalent, with the bellows in addition, to the longest draw that will be required. A variation from this would be to have extension pieces start from the four sides to the box holding the camera, so that a good 5x7 lens, when stopped down, may enlarge from a 6½x8½ plate and possibly from an 8x10 plate. (Sketch No. 5.)

A cap to fit the lens-holder, with orange glass, or celluloid, will enable you to place the paper or (slow) plate in position with little, if any, action by the light. In using a fast plate, the cap must be red. Glass headed pins will be needed, as the simplest way of holding the paper or plate in position.

Now for the enlarging board, or easel. It should be four times (two diameters), the size of the largest paper or plate to be used. If one quarter of a plate is to be enlarged to 18x22, it is evident that this will need a board fully 36x44 inches. Two remedies, instead of having a large board, would be to use a two-way slide for the negative-holder, or to have the camera-holder swing sideways and vertically, but the large board is useful if practicable. This board must be made to a perfect plane, and placed perpendicularly. It may hang from two strong pieces at right angles to the window, and in that case it should run on four rollers, two, a foot apart, for steadiness, on each side. An ordinary sash-lock on each side, will hold the board in position after focusing. Otherwise, the board may be supported upon a frame resting on the floor, with four rollers, which should run in grooves, or between strips, so that the board may be kept parallel to the negative. Your tank with running water, shelves to hold trays and chemicals, and at least one tray for each size of enlargement, will complete the outfit. Of course everything must be light-tight. You will now be ready to make enlargements with a first-class equipment, either for pleasure or profit. The careful directions given are needed to avoid having to make changes, and so that the apparatus will work properly from the start. The second article will contain full directions for enlarging on paper; and the third article, directions for making negatives enlargements, with special suggestions of methods for obtaining artistic effects.



CHRYSANTHEMUMS

BY BELLE JOHNSTON



CARMEL BY THE SEA
by W. E. DASSONVILLE

China Decorations by Means of Photography

Sensitizing Solutions and Apparatus Adapted Thereto.

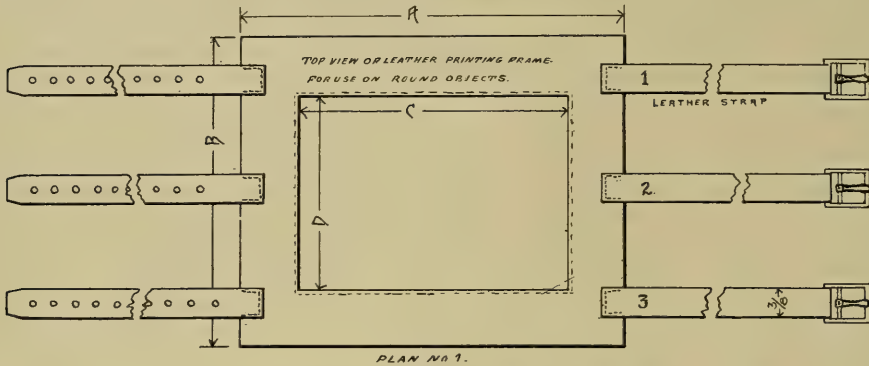
By W. S. WHITCOMB

As an adjunct to the decoration of one's home, few, if any, of the arts play so important a part as does photography. This fascinating work has grown in interest and value to such an extent during the past few years, and the number of beautiful creations evolved from it have multiplied so rapidly, that today I may safely say, it stands pre-eminently at the head of the list. Enlarged pictures for the wall; photographically decorated soft pillows, tidies, doylies and calendars all have their place. We seldom see, however, the photograph of a familiar nook or group of friends decorating the family lamp or rose bowl. This work is not difficult, while its artistic effect is beyond question and at Easter and holiday times it will be found to provide that ever desirable "something new" in the way of gifts. Of course, in the decoration of articles of this kind, one must of necessity use the film negative, as plates could not be made to conform to the rounded surfaces; nor would they, if we were able to use them, be productive of as good results, owing to their non-flexibility. Now while this is true, those owning plate cameras need not be discouraged, if they desire to take up this work, for the convenient film pack or cut film, obtainable everywhere, for use in plate cameras, brings this work easily within their reach. Printing frames of special construction as here described, must be provided, for like the film, these must be made to conform to the various shapes and surfaces to be found on the objects we intend to decorate. For use upon round or oval shaped objects such as a vase, salad bowl or water pitcher we will, after having selected our film, proceed as follows: Out of a piece of leather one-eighth of an inch thick, cut a form in the shape of a mask as shown in plan 1.

thus: making this opening in the center of same, slightly smaller than the film we intend to use and leaving sufficient border around the edge to completely cover our sensitized surface in printing, so that nothing but that portion which lies directly underneath the film and which this reading matter represents, receives light. Any failure to do this will spoil the artistic effect of our work.

Having done this, we will next require a piece of transparent celluloid. This can be obtained if from no other source by fixing a piece of undeveloped film in hypo and washing and drying it in the usual way. Out of this celluloid, we will cut a piece slightly larger than the opening cut in our leather form, which form will be referred to in the future as being a frame. Now with a needle and thread we will, as is shown by the dotted lines in plan 1, sew this piece of celluloid firmly over the cut-out center of our frame, for the purpose of preventing any possibility of distortion which might be caused when fastening our frame on any object for printing, by the straps as shown and numbered 1-2 and 3 in drawing. (Plan 1.)

The body of our frame being now complete we will next affix to the sides of same the three straps as mentioned above. These should be of sufficient length to go completely around the object upon which we desire our print to appear and should

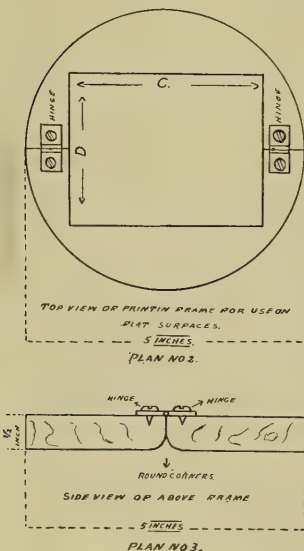


be so constructed as to enable us to unfasten one, either No. 1 or No. 3 but not both, for the purpose of examining the progress of work in printing.

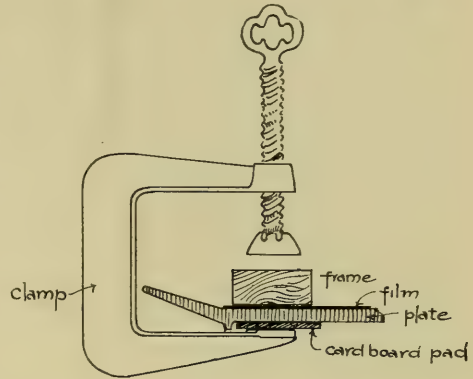
The author has a frame the straps upon which are as follows: The buckle ends are each 4 inches long and the other end in which the holes are perforated measures 12 inches, this frame gives a wide range to the selection of objects intended for decoration and will be found in most cases to be sufficient. For printing pictures, size $3\frac{1}{4}$ by $4\frac{1}{4}$, the dimensions of my frame are as follows (see plan 1): A, $5\frac{1}{4}$ inches; B, $4\frac{1}{4}$ inches; C, 4 inches and D, 3 inches. While for my 4x5 pictures the dimensions are: A, 7 inches; B, 6 inches; C, $4\frac{3}{4}$ inches and D, $3\frac{3}{4}$ inches. Having completed our description of a frame for use on round or oval-shaped objects we will now suppose that the object intended for decoration be a flat one, such as the aforementioned china-plate or pin-tray. For this we will construct our frame as follows:

Out of a piece of pine or white wood $\frac{1}{2}$ an inch thick we will cut a circle or square, as the case demands, of a size to fit perfectly that surface upon which we

desire to make our print (see plan 2) which illustrates the top view of a round frame for use in printing on a plate the counter-sunk center of which measures $5\frac{1}{2}$ inches in diameter. We therefore make our frame 5 inches in diameter in order to fit in this space snugly. Having done this we will next cut an opening in the center of the frame slightly smaller than the film we intend using as was the case with the leather frame. Then we will saw the frame in halves and after connecting the two halves by means of two hinges as shown (see plan 2) we will round off the two inside corners as shown in plan 3; for the purpose of preventing any possibility of our moving or scratching our work when examining the progress of same in printing. In order to bind our frame and plate or tray firmly together during printing probably nothing will be better than two cabinet-maker's



clamps, similar to one shown in plan 4, can be purchased for a few cents in any hardware store. One of these clamps but not both, may be removed at one time and we can then examine our work by raising one half of our frame on its hinges in the same manner as with the back of an ordinary printing frame, carefully replacing clamps and screwing down until printing is completed. It will be well to place a pad of cardboard or some other elastic substance between the iron clamp and our plate or tray to minimize the chances of breakage. In case the surface on which our print is to be made is not quite true it may be found necessary to glue a thickness of felt or flannel on the bottom of our frame to secure perfect contact. Our frames being now ready we will next turn our attention to the preparing of the sensitizing solution, to be used in making our vase or tray ready to receive the print. This can best be done in the evening by removing the ruby glass from an ordinary dark-room lamp and inserting a yellow one in its place. The solution is made as follows:



PLAN 4

- | | |
|------------------------------|-----------|
| A. Alcohol | 1 ounce |
| Ether | 1 ounce |
| Pyroxyline (gun-cotton)..... | 12 grains |
| B. Silver nitrate | 60 grains |
| Water | 1 dram |
| C. Strontium chloride | 64 grains |
| Alcohol | 2 ounces |
| D. Citric acid | 64 grains |
| Alcohol | 2 ounces |

Mix thirty minims of B with the whole of A, and add a dram of C and half a dram of D. Shake well after each addition and coat the object intended for printing at once by flowing the solution as prepared over its surface, allowing same to dry thoroughly before proceeding to print.

For the benefit of those of my readers who have never attempted the making of sensitizing emulsions it would be well here I believe to call their attention to the following important points:

1. Ether fumes, being easily ignited and pyroxyline being a dangerous explosive great care should be exercised in not mixing these solutions too near a lamp or flame.

2. Distilled water only should be used in the making of these solutions.

3. Care should also be used in excluding from the emulsion-making and coating rooms all traces of white light and all emulsion not used at once, which it is the desire to keep, should be well corked and kept in absolute darkness.



BROTHERS
by ADELAIDE HANSCOM

4. Cleanliness is holiness in photography and in the making of any emulsion great care should be used in seeing that all dishes, bottles and corks used are absolutely clean. This also applies to that surface upon which you intend to coat your sensitizing solution. In printing on an object sensitized with the solution as above, we will follow out the same general rules as are laid down for ordinary Aristoplatino printing, allowing the shadows of the print to become well bronzed before removing the printing frame from the object. Printing being complete we will next wash our object in several changes of clear water until all milky appearance is gone, after which we will proceed to tone. Now, while any of the ordinary toning methods usually employed for Aristo and kindred papers may be used, the one which has given me the best results is made as follows:

To thirty-six ounces of water add one grain of chloride of gold and neutralize by the addition of a few drops of a saturated solution of carbonate of soda or borax, made by dissolving all the borax or carbonate of soda you can in one ounce of hot water. Having prepared your bath as above take the well-washed tray or other object and immerse it in the above bath and tone until the whites are well cleared; then remove and wash in running water for from five to ten minutes, after which transfer to hypo bath made as follows: Hypo, one ounce; water, sixteen ounces. Leave object remain in this bath for fifteen minutes, then wash thoroughly in running water for one hour.



CUPID'S SHAFT

BY CURTIS BELL



LITTLE MARY
by OSCAR MAURER

How to Make Photography Pay

By BERNARD C. ROLOFF

It is not my object in this article to tell in an abstract sort of manner how it is possible to make photography pay, as I have seen done in other periodicals, in which the author describes enticing, but theoretical, methods which he himself has not tried, and which may not be of any practical value to the amateur, but to aid others to a possible solution of the problem by a plain recitation of actual experiences of an amateur—myself, as it happens—who has, I believe, solved the same in an entirely satisfactory manner.

It must be understood that to be successful presupposes a fair general knowledge of the practical side of photography and some understanding of the principles of composition. This is desirable in order that work may not be rejected on the plea that it is poorly performed, although there is no reason why the amateur of less experience and ability could not dispose of some of his earlier efforts if reasonable care and common sense be used. Such work, however, will never control the prices which are to be expected for better work, and for work done for commercial use and for large business houses.

I have found that it is always possible for the fairly well posted amateur to pay his expenses by means of photography (in the proper seasons) by merely making pictures of people and places and exhibiting them to the prospective buyer. In many cases it is not even necessary or desirable to *offer* them for sale, nor to say anything about selling, or to appear at all eager to do so. People who discover that there are such pictures in existence will nearly always want a few, and inquire as to the cost; therefore, it is well (in the beginning at least) always to appear *the amateur*, and to impress people with the fact that you are not out for the money, but that it costs money to play with photography and you find it necessary to charge them a reasonable sum for your work. If you *pretend* to be a professional, without the ability of one, you are less liable to make a sale, as people are not so ignorant as not to know the difference between professional work and amateur work in its early stages.

I began to make photography pay by consenting to make pictures for my friends, and what amateur is not the recipient of such requests; but, instead of *giving* them away, I always put forth my best efforts, and when casually asked how much they would cost, asked a reasonable compensation, qualified as before stated. It is unnecessary for me to explain how to make your vacation money by taking pictures and taking orders for them on the spot, promising later to send the pictures forward for a certain stipulated sum, as this has been explained by other writers time and again, and is embraced in the foregoing paragraphs. However, for a time I lived in the country, not far from town, as it happened, in the close vicinity of a popular picnic ground. In wandering around through the grounds I was often accosted and asked to photograph a group, and naturally consented, often taking orders for fifty or a hundred copies. However, to do this sort of thing right, if you have the ability, it is necessary to appear as a professional provided with the necessary paraphernalia to take at least five by seven views, and to have a business address and a card. Then you may solicit orders. I have taken pictures of country homes and places and afterward disposed of them by first calling and asking permission to photograph the

grounds. Do this whether you consider permission necessary or not, stating that the view and place were so pretty (or something equivalent) and appealed to you to such an extent that it seemed you ought to possess a picture of the place to add to your collection. This "song and dance" will seldom fail to take, and by this means I have secured many valuable orders. One advantage of this method is that if you do not get an order or a request for copies of the picture, you need not take the trouble to waste a plate on the homely place, although it is advisable to make a bluff at it in any event. As to charges for this work, I have often charged one dollar for two prints, and where I am requested at first hand to do such work, I have charged as much as one dollar for each negative wanted and fifty cents each for prints, and have found the majority willing to pay the price.

My methods of making photography pay have not been limited by any means, and I will give instances of how I have secured money for work which was apparently taken by chance. This is where I drifted into newspaper photography. I became acquainted, in one way or another, with the Sporting, City and Sunday Editors of the newspapers of my town, gave them my name and address, showed them a few samples of my work, told them how I might be reached by telephone on a hurry call, and requested any orders which for some reason or another would not go to their staff photographer (provided they had one). At the same time I approached the City Editor and asked him how much he paid for pictures of accidents, fires, wrecks, etc. I found that most papers paid from one dollar to two dollars for each negative accepted, which, however, must reach the office promptly after the incident to be of any value. I also ascertained the latest hour at which pictures would be received in time.

In order to make anything on this deal (I worked in a down-town office) I always carried my camera, a four by five cycle style, wherever I went. It was always loaded and ready for instant use, and whenever anything was "doing" and I knew of it, I was there "with the goods" (to drop to the vernacular). In most cities (not including large cities like New York and Chicago, where probably slight accidents are considered of such minor importance as not to warrant giving them space), street-car accidents, wrecks and extended delays of traffic are frequent, especially in the morning, at noon and in the evening. I have often been delayed by cars off the track, collisions, etc., and immediately took advantage of the fact to expose one or more plates. If this happened in the morning, I took the plate home at noon, developed and fixed the negative, gave it a slight rinse in water and placed it in a (closed) enlarging box (which I have described in a previous issue), projected the image from the plate onto a piece of developing or other bromide paper, about six and one half by eight and one half, developed it, fixed, rinsed and dried rapidly, and I can vouch for it that I have done all this in the short space of thirty or forty minutes and brought the finished print back with me down town to the newspaper office when I returned from luncheon, in time for the evening editions.

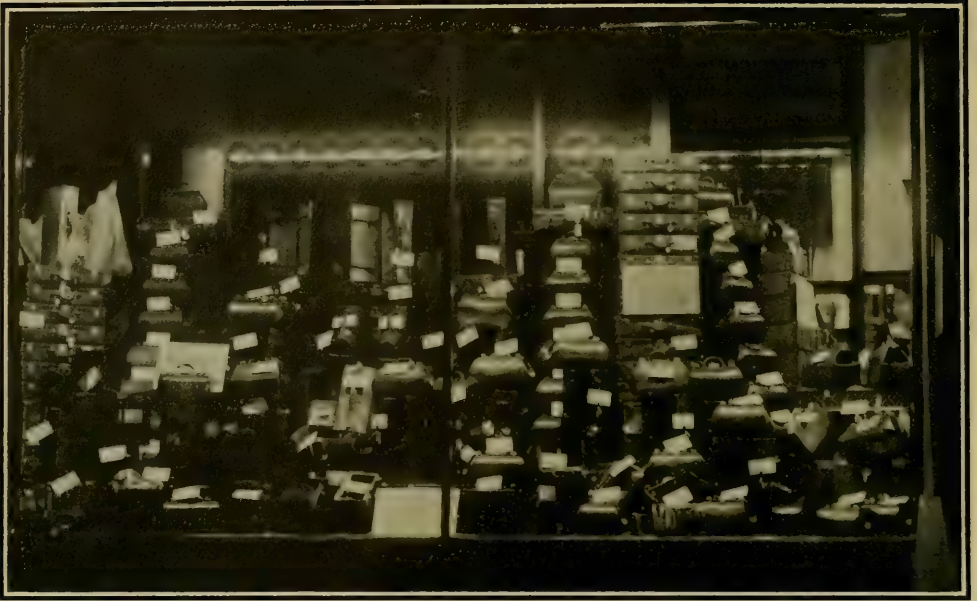
Our first illustration is an example of a rapid newspaper photograph taken in this manner. Many workers undoubtedly have more leisure than I, or work out of doors and around in the down-town districts of their home towns, where their chances for such things are infinitely greater. Then, again, I would take pictures of new buildings which were being erected, or old landmarks which were being, or



about to be, torn down to make way for more modern structures; of athletic sports, games, etc., and present them to the proper editors of the papers. Or, perchance, the Sunday Editor would give me an order to make a series of pictures of summer homes of wealthy residents, of yachts, and a variety of things to illustrate a Sunday "story." I need not go into details as to how to get these things, and what kinds of prints are wanted, as this information may be secured from editors, and, furthermore, if I am not mistaken, a previous issue of this magazine contained an excellent article on this subject.

Here is another "graft" which I worked when I was temporarily out of employment. I went to all the stock-dealers in town. I knew them from having bought goods of them for years, left my card and perhaps a display sign to the effect that orders were taken for all kinds of in and out-door photographs, prices reasonable, or something to that effect. I also left a schedule of prices and made arrangements for the dealer to have from five to ten per cent on all orders taken through him. The result was that I had all the work I could attend to during the daytime, and for evening work accepted amateur finishing from stock-dealers who did not have their own finishing departments. This latter work from one department store alone netted me for a time, from six to ten dollars a week, using only three evenings a week.

I did at one time make quite a lucrative business out of show-window work, not only for the managers of large department stores, but by becoming acquainted with "window dressers" of such and other stores, who are often willing and sometimes even anxious to have pictures made of their displays for reference and to show to future employers to demonstrate their efficiency or ability in their particular line. In some cases where the display happened to be all of one line of goods made by one manufacturer, I have been the recipient of orders from the manufacturers for copies of the pictures and have found them always willing to pay a substantial price for the same.

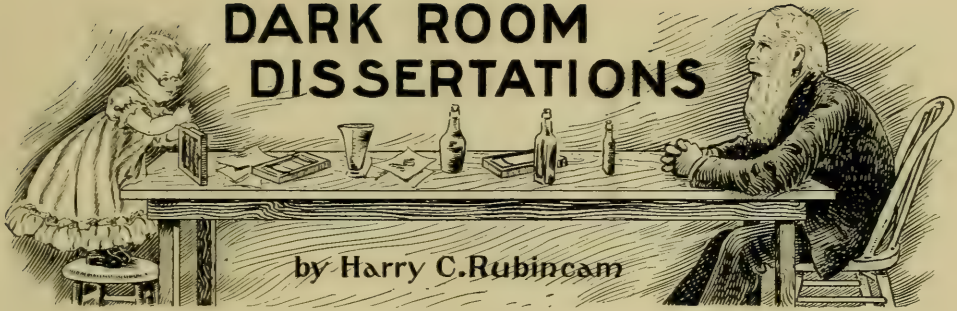


The window-display picture, see illustration herewith, was such a one, and was taken under the conditions and in the manner about to be described for general show-window work.

It might be well to state, in this connection, that in taking pictures of this sort it is necessary in nearly every case to take the pictures after dark and late enough in the evening so as to be assured that the lights in the show-windows opposite may be extinguished before you commence work. In some large cities the street cars run until about two o'clock, on day schedule, then stop running, or run an owl-car service on a schedule of one every thirty to sixty minutes. This fact must be taken into account not only because the lights from passing cars must be guarded against, but I have found that in many instances where the show-windows were large it necessitated placing the instrument far enough back to secure all of the subject on the ground screen, which usually meant to get right in the middle of the street, on the tracks. I have always objected to the use of a wide-angle lens for such work for various reasons, though, of course, with such a lens it would not be necessary to get so far away from the window. However, I always preferred to wait until quite late at night before commencing work, as the traffic is then very light and there is less danger from passing lights and of being run over.

These few hints are but a portion of those that might be advanced. One will find that the securing of a satisfactory photograph of a difficult subject will suggest to possible customers the probability of putting your talent in that direction to use in other photographic channels. Your services will be in demand and it will require only care on your part to insure a constantly increasing field. Care should be taken to turn out the best work possible, even at the inconvenience of making a second or a third trip, or at the expense of a few extra plates if necessary. A reputation once gained is easy to retain, but in its acquirement there must be no needless slip.

DARK ROOM DISSERTATIONS



"Goo goo!" said the baby as he put aside his rattle and toddled over to where I was trying to coat some paper for gum-bichromate prints. He had heard me saying a few things because I could not coat it without streaks. Putting a copy of Spencer's "First Principles" on top of the dictionary and a copy of Ruskin's "Stories of Venice" on top of that, he climbed up them and, reaching for my drawing-board, quickly tacked a sheet of Wattman's paper on it with "push pins," and, seizing my hog's-hair brush, dipped it in the saucer of coating mixture and deftly spread it over the paper, smoothing it down with the blender until it resembled a sheet of carbon tissue, it was so smooth and even. "Goo goo!" murmured the baby, "when mudder gives baby thum Mellin's food baby will show fadder how to do it in two colors." Then the alarm-clock went off and I woke up. Perhaps a piece of mince pie and an article by Frank M. Sutcliffe copied in March *Photo-Beacon* had something to do with it all. It is too bad Mr. Sutcliffe does not own a good American alarm-clock, one of those strong-voiced ones that will bring you out of the dopiest kind of a dream.

Ochlortetraethyldiamidotriphenylmethan! How is that? Not a Russian general; not a town in Manchuria; not a new developer; not even a new anastigmat lens! Simply one of the things that will enable you to make photographs in natural colors—the real thing this time. That is, so one Frederick Collins tells us in the magazine sections of the Sunday papers. After reviewing at length the operation of the Ives Kromskop, he says:

"A new and almost ideal three-color printing process is one in which the colors are not previously applied nor the printing done upon colored paper. The process that has just been brought out works with colorless films, which, upon exposure, according to their preparation, will color differently red, yellow or blue. In this process collodion, a solution made of gun-cotton dissolved in alcohol, and much employed before the advent of the dry plate, is used as the color carrier. That is to say, certain chemicals are mixed with the collodion, which turn crimson, yellow and peacock blue under the action of light, although these are perfectly colorless when in solution or mixed with the collodion.

"A sheet of paper is then coated with the collodion solution, that turns blue when exposed to light, and is printed from the negative made through the blue screen or glass. It is next fixed in a ten-per-cent solution of chlor-acetic acid, washed like an ordinary silver or velox print, when it is brushed over with a thin solution of gelatine, which forms, when dry, a hard coating.

"The gelatine film serves to prevent the blue collodion picture from dissolving away, when the second and red collodion is flowed over it. The red part negative is next put on so that the outlines of its picture will exactly register or cover the blue

one. This is now exposed to the light, fixed, washed and coated with gelatine, when the operation is repeated in the same way for the yellow picture.

"Blue pictures are produced with ochlortetraethylamidotriphenylmethan, red pictures with the leukorhodamine and yellow ones with leuco-fluoresceine. These bases may be obtained at wholesale chemical supply houses and will soon be on sale, put up ready for use by dealers in photographic materials."

Is it not fine? And so simple, too! All you have to do is to get some of those "colorless films" that *upon exposure* develop a color, then after printing one negative on your paper, dry it and getting the second negative *registered* on the print that has been *soaked and sized since the first printing*, you proceed as before and then repeat. Easy? Just like shooting fish! But, of course, you must not forget to secure some ochlortetraethylamidotriphenylmethan, some leukorhodamine, and some leuco-fluoresceine. These you get from the chemist. Going into the store, you take three long breaths and say, "I want some ochlortetraethylamidotriphenylmethan."

"Aw gowan," replies the chemist, "talk United States! D'ye take me for a Roosian?"

"No," you say, "I want ochlortetraethylamidotriphenylmethan?"

"Oh!" says the chemist, "ochlortetraethylamidotriphenylmethan?"

"Yes," you reply, "ochlortetraethylamidotriphenylmethan."

"Haven't got none," says the chemist, who is ungrammatical.

"Where can I get it?" you ask.

"Buy a couple of pounds of alphabet macaroni and mix it yourself," replies the chemist, who is also facetious.

So you try another chemist and another and another until you find it and when you do—ha! ha! when you *do*—you have but to follow the above directions. And whatever you do, don't forget the ten-per-cent solution of chlor-acetic acid. Be careful in handling all these chemicals as the combined formula of all color processes seems to be R. I. P.—P. D. Q. z.

N. B. This last is a joke. Diagrams and raised-letter explanation on application.

* * * *

"It may not be of use to the non-chemist worker in the darkroom sometimes to know of a simple test or two by which to recognize the main constituent in a developer, or the developing agent in a solution," says Dr. F. Graves in the March number of *Photo-American*. It may not, doctor, it may not! And we think you owe us an apology for continuing after you admitted that you knew it.

* * * *

Some one has made the suggestion that dealers should not sell flashlight powder without warning customers as to its danger and supplying them with full printed directions as to its use. Let me go a little further than the suggestion and say that it should be made a criminal offense for a dealer not to do as suggested. We make druggists put a skull and cross-bones on poisons, and we even prohibit their selling certain of them excepting under certain regulations, but a dealer in photographic materials will hand out enough flash-powder to blow a man to Jericho and back again with as much sang-froid as though he had sold a pound of nails or

a half pound of prunes. I remember the first time I tackled it. I had two kinds of flash-powder. I had no idea as to the quantity I should use, and the contents of one package not seeming enough, I mixed part of the other one with it, and then applied a match. When I came to a proper realization of what was what, I was hustling for a doctor's office. After he dressed my hand I hustled back again and found the hotel in a panic. After that I started to look into the peculiarities of flash-powder, and as a result I have never used any since, although that was many years ago. The more you know of flash-powder the less you want to do with it. If you cannot find enough exposures to make in the daytime you had better wait until you can buy a mercurial tube. A Denver chemist was once mixing flash-powder when the stuff went on a rampage, wrecked the building and scattered the chemist all over the neighborhood. A Philadelphia teamster once dropped a case of flash-powder on the sidewalk, then made a hurried exit from this land of worries, and a newspaper notice of an explosion in its factory is the last ever heard of a concern that once manufactured the safest and most non-explosive of all flash-powders. It is only fair to say that my prejudice against flash-powder has held me aloof from "flash sheets," too, and I am personally unaware of their performance, though I understand they are comparatively safe. However, whenever my services are solicited, I always make the same condition the Kite did when asked to bury Cock-Robin. You will remember the answer:

I, said the Kite,
If it's not in the night.

This reference to a funeral, by the way, is very appropriate in discussing flash-powder.

* * * *

Did you see the March *Photo-Times*? Great roast for "yours truly"! When Steiglitz read the thing he exclaimed: "It's well that Rubincam knows Hord." I guess that's all there is to say about it!

* * * *

Suggestion for a catalogue fly-leaf inscription for the Second American Salon at New York.

"O, I lied, sir—I forget the precise lie; but you may depend on't, he got no truth from me."

THE RIVALS.

* * * *

Roland Rood is again tackling his old proposition that photographers cannot make gum prints. In a long article in the February number of the *American Amateur Photographer*, he starts out with the avowed purpose of avoiding the philosophy of the matter, while giving some questions and thoughts that arise in the minds of painters. Whenever Rood gets down to photography his philosophy seems to suffer from a sort of rag-time meter, and now it seems that some of his "thoughts" are suffering from inflamed punctures. How any one can expect to arrive at conclusions that are satisfactory even to themselves, much less to others, by taking as a basic principle of their argument, a false view of a well-known condition, is and always has been beyond my understanding. Yet it seems that



AN OPEN-AIR KITCHEN, MEXICO
by F. E. MONTEVERDE

Rood has a peculiar penchant for "forcing" a basis from which to argue. In the article referred to, for instance, he explains the *alleged* statement of the recent jury of painters in New York to the effect that "photographers cannot make gum prints and work like artists, because they do not know enough." His explanation is that not a man on the jury had worked at drawing and painting for less than twenty years; that it takes fifteen years to learn local manipulation which is the art of the painter, and five or six years if only black and whites are attempted, will enable one to attain but passable merit in the expression of form. Here, mind you, he makes no allowance for the difference of individual intellects, but forces a basis of argument by asking how many photographers have devoted five or six years to the study of drawing. Yet it is possible for a person to study manipulation for *five* years, or much less, and execute a work of art that will surpass anything John La Farge has done in all his fifty years of painting. Rood's set rule of fifteen years for manipulation and five or six for drawing in black and white, reminds me of a man I once knew who after four years of constant "music lessons" got so he could play a simple arrangement of "The Anvil Chorus" with more or less abandon. One day he got married and sometime afterward in telling me of his decision to teach his wife the piano, he said, "You know I can teach her for four years and then if she wants to go further she can have another instructor." But aside from the differential receptiveness of individual intellects, Rood also overlooks the wide difference in the technique of drawing and the technique of photography. In drawing, not only must the brain be trained to grasp the elements of values and the molding of form, but the hand must acquire the cunning involved in transferring the conceptions to a flat surface. And there is the main difficulty, the transferring of the idea to a flat surface! That is what takes the years of training and practice.

But is not this largely overcome in photography? Does not the lens and the dry plate and the automatic phases of printing processes put the photographer where the acquired conceptions and a post-graduate course in drawing reduces the time, even on a basis of Rood's system, to a fraction of his limit? Why then need we, as Rood asks, point out more than half a dozen photographers in all America who have any real understanding of painter conceptions of drawing and values based on time of study? But the strangest part of it all is that many, or in fact, nearly all, of the leading photographers have had the same training the painter gets. When we read of their experiences, we learn of years spent in American art schools, of trips abroad to attend schools there, of terms spent under the tuition of some master-photographer either here or abroad, who in his turn went through the same course. Can it be that Rood in his reference to the exclusion of "painter-photographers" means to sweep aside these and pass upon the photographers' right to make gum-prints from the results of half-trained efforts of minor photographers? Perhaps so, perhaps so, friends, for more than once has Rood set a condition precedent to a result, then barred all who had complied therewith! There are, in fact, not more than a half dozen successful gum-workers in America, but for every photographer who makes bad gum-prints there are a thousand painters who make bad paintings and to apply Rood's process of averages for the elimination of gum-prints to the painters would mean that the renowned jury itself would have to quit its several studios and go to painting signs!



THE WHITE BIRCH
by JOSEPH DAVIS

The First American Photographic Salon

By ALBERT J. LEBRETON

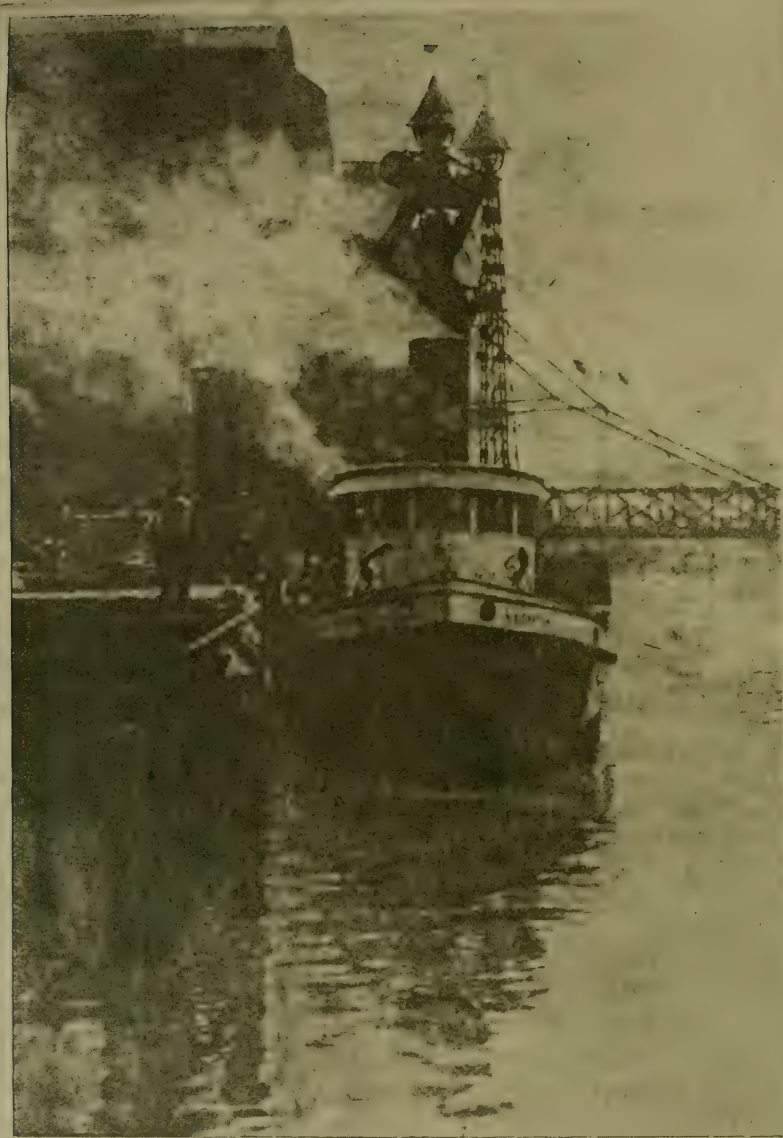
When the question of entering the American Federation of Photographic Societies was brought up in the California Camera Club, at the time of the formation of such Federation early in 1904, the Board of Directors decided not to enroll the Club in its membership. The writer, who was in the East at the time, was not familiar with the local situation, but he has since learned that the action of the Board was the result of ineffectual attempts to secure definite information concerning details which it considered important. It is to be regretted that those



ONE CORNER OF THE MAPLE ROOM, PALACE HOTEL
First American Photographic Salon, San Francisco

having the matter in charge in New York either did not realize the importance of furnishing the required details or were not prepared to do so. The Club having decided not to associate itself at that time with the societies forming the Federation, its connection with The First American Salon then and there ceased.

Under these circumstances the task of securing a collection of representative work of the pictorial photographers of the Pacific Coast to be submitted to the jury in New York devolved upon the local member of the Salon Committee, Fayette J. Clute. Through his efforts nearly two hundred and fifty prints were collected and sent on. Of this number a high percentage—over twenty-five per cent—passed the Jury of Selection, a most gratifying result in view of the fact that the entire collection accepted represented but four per cent of the total entries.



THE WATER WAY
by MISS FEDORA E. BROWN
First American Photographic Salon, San Francisco

On the evening of March 25th a telegram was received from Chicago asking if the exhibit should be shipped here. Knowing that during the writer's stay in New York he had been brought in touch with the prime movers in the Federation, and through their courtesy was in a position to judge of the high quality of the exhibit, Mr. Clute at once consulted him. There seemed no reason why the necessary interest could not be awakened, and the required financial aid enlisted. They at once set to work, and as they proceeded, were gratified at the kindly feeling manifested on all sides. The San Francisco Salon Club was the name selected to designate the body under whose auspices the exhibition was to be held.

The Salon opened in the beautiful Maple Room of the Palace Hotel on the 7th of April, continuing four days and evenings. The experiment of holding an exhibit in the shopping district was made necessary on account of other suitable places being unavailable at this time. Owing to the generosity of the gentlemen who interested themselves in the matter, it was made possible to exact no admission fee, and also to present an unusually attractive catalogue, undefaced by business announcements.

That these departures from precedents met with general approval was quite apparent. A great many of those prominent in local art circles visited the Salon repeatedly and voiced their gratification and pleasure. The large attendance, despite the scant publicity given, demonstrated beyond a doubt the popular interest in pictorial photography. Exhibitions of this character cannot but have an educational value, and prove of lasting benefit to those interested. This unquestionably was a potent factor in securing the hearty co-operation of the California Camera Club as a body, and its members individually. The thanks of the Executive Committee are particularly due to the following who so willingly contributed their time and best efforts to make the exhibit as attractive as possible: Messrs. Hoyt, Maurer, Sewell, Tolchard, Kelly, Tanron, Fletcher, Sickles Hunkins, and Crosseup.

The six leading firms handling photographic supplies in this city must be accorded full credit for their unstinted financial support. Quoting from the Committee's announcement: "The dealers whose names are given below have also shown their desire to assist the furtherance of artistic photography by liberally contributing to the financial support necessary to make the showing of this Salon possible in San Francisco: Hirsch & Kaiser, Gallagher Brothers, Sunset Bazaar, Kirk, Geary & Co., T. P. Andrews, and H. B. Hosmer." P. C. Hale, of Hale Brothers, Howard S. Tibbitts, of the Sunset Press, and W. E. Palmer, of the Humboldt Savings' Bank, also liberally contributed. In addition Walter B. Webster, H. L. Byrne, J. R. Gwynn, J. J. Lermen and D. J. Callaghan generously assisted. This article must not be allowed to close without making mention of the benefits derived from the kind assistance of Will Sparks whose knowledge and experience was so cheerfully placed at our disposal.

It is hoped that the encouraging support and the hearty reception accorded this Salon will long remain a source of gratification to those who were instrumental in bringing it about.

An Artistic Aspect of the First American Photographic Salon

By WILL SPARKS

It will no longer be possible to ignore the claims of photography as a means of artistic expression. This fact has been settled by the First American Photographic Salon, but at the same time this settlement only makes more apparent the necessity of artistic knowledge in order to produce an artistic photograph. Art is art no matter how the artist gives his results to the world.

At a first glance the hand of the artist was apparent in the three hundred and eighty-four pictures that hung on the walls of the Maple Room at the Palace Hotel. To what extent this was due to the artist jury is a matter at which I can only make a guess. I have been told that there were nine thousand pictures to select from and that many of the "best" of them were thrown out. I have also been told that the jury made several poor selections. Be that as it may, one thing is certain, there were a great many photographs in the collection that would never have passed a photographers' jury. So after all we come back to the old fact that "it all depends on the point of view."

The ideals of art have changed constantly through the ages. But the standards of art are set. One of these is that there must be no glaring physical errors in the picture. A real, true, honest photograph can have none of these. It is merely a record of what is in front of the lens at the moment the rays of light pass through and strike the sensitive plate. But such pictures have little artistic value. They are merely "views" and can be turned out by thousands by almost anybody. By physical error I refer to such a mistake as I recently saw in a "fine" photograph where the scene was supposed to be twilight and the shadows of the objects in the picture showed it to be noonday. It was printed very dark and possibly fogged a bit to produce softness. To the cultivated artistic eye and sense such a picture is only so much rubbish. Such pictures were remarkably few in the First American Photographic Salon.

The present ideal of artists for a picture sifts itself down to three fundamentals—surface, color and line. And to my mind this is what the members of the jury felt when they selected the pictures we have under consideration. And it is also deductible, that it is this also which makes the exhibitions noteworthy. The most noticeable things about the exhibition were the large number of pictures that looked like photographs of paintings. And when we notice that almost the only artistic faculty the photographer can exercise is that of selection it becomes very remarkable. Of course a few photographs had hand-work on them which in a way should not class them as photographs, because to do the hand-work correctly the photographer must be that much of an artist. And I must say that most of the hand-work that I saw could have been improved by a greater artistic knowledge.

There seemed to be some sort of coincidence in the work that made certain kinds come from certain localities. For instance, taken as a whole, the best interiors came from England, the best landscapes and marines from Germany and Denmark. The best portraits seemed to come from the central states of our own country.



YVONNE

by SOLON L. GATES

First American Photographic Salon, San Francisco



CEDARS

BY EDWARD J. DAW

First American Photographic Salon, San Francisco

New York men seemed to do more work of an illustrative nature than the others, while our own men of the coast reproduced the scenes that can be found nowhere else. So we find right here one of the limitations of photography.

While I do not expect every photographer to agree with me I will state that I consider the best photograph in the show to be the little landscape entitled "Cedars," by Edward J. Daw of Washington, District of Columbia. Why? Because it contained more of the qualities that most artists would put into a landscape than any other picture there. There was atmosphere; light-texture, tone, composition. In fact everything that an artist would ask for except color. And more, it was almost the only subject an artist would put his easel down in front of and start to paint without giving any thought to arrangement. The other picture by Mr. Daw, "The Ploughman" had little to recommend it.

Dr. T. Moeller, of Copenhagen, Denmark, also had a most creditable "Landscape." This picture, characteristic of his country, had many artistic qualities and showed the producer to be a hard student of both the chemical and the illustrative part of his work.

The great painter, Mesdag, was suggested by a marine "Strand bei Schwenningen" produced by S. Urff of Hanau, Germany. Here was motion and the life of the sea. The composition left nothing to be desired.

"After the Rain," by C. A. Reitzel, Copenhagen, was an honest photograph. It was not as artistic as many others, but all there was of it was pleasing and refreshing.

W. H. Porterfield, Buffalo, had four of a wide range of merit. Two of them were ordinary, one was very fakey and the fourth was a gem. It was only a small picture with the title of "A Peaceful Valley," but it was a pleasure to look at and had a certain quality of bigness seldom seen in a photograph.

Seven pictures by Adolph L. Petzold of Philadelphia were all of the imitative order. Their merit was doubtful but he has a quality of printing that brings out the best in his work. "A Road to the Sea" was intended to look like a charcoal drawing but failed in all but the looks. The paper was only stained and the stain was more apparent than the picture.

"By the Pool," one of two by George Whitehouse of Staffordshire, England, was one of the gems of the collection. It was really a landscape.

Osborne I. Yellott of Towson, Maryland, showed few pictures which were highly creditable as a collection. There was nothing great about any of them but all showed a directness of purpose and concentration.

No better group of work was shown than that by the late H. P. Robinson of Surrey, England. It was all direct and legitimate and little fault could be found with any of them. His work contained one master piece entitled "Storm Clearing Off" that was as good as any thing in the exhibition.

"Morning in the Farmyard," by John W. Schreck of Buffalo, New York, was well worth looking at. It was good technically and in artistic beauty was well toward the front.

A small picture entitled "Plowing," by Holden Samuel of Brooklyn, was one of the very few hand-worked pictures that was up to the mark. Of course the impression of the picture raised the question as to whether it was not pretty late in the day for a farm team to be at work. A better title would have been desirable but the general effect of the picture was highly artistic.

"A Shaft of Light," by S. G. Kimber, Southampton, England, showed the interior of an old church crypt. Fine technical work and a keen appreciation of the artistic aspect all tended to produce this highly satisfactory result.

"Copenhagen at Night," by N. Fischer, was truly a remarkable piece of work, but it could be done much better by an artist in a good deal less time. The effect of light was very good but the elaborate detail of the wall was not characteristic of night. From an artistic standpoint it lacked breadth.

There were a good many snow scenes shown but somehow they did not suggest winter. "Approach of a Winter Evening," by Clarence G. Dudley, was one of the few exceptions to this rule. This picture, although not a straight photograph, had the high lights in the right places and a proper massing of shadows.

"Chillon," by Wendell G. Corthell, showed the old castle in a new aspect, and was a good piece of technical work. Several others, by the same worker, all had merit of their own.

In the way of good pictorial work, arrangement, composition and light concentration there was nothing better than "The Laurels," by Laura Adams Armer. In this picture is shown the results of careful art training coupled with a fine artistic sense.

"The Parade," by Miss Cicily Adams of Livingstone, New York, was worthy of the greatest consideration. Of course there must have been a strong element of chance in getting this tint that can be over looked and credit given for the result.

"Thus Have They Earned Their Daily Bread," is the long title given to a good photograph by William H. Zerbe. The photograph had about all that could be expected of such a piece of work, but the meaning of the title was not clear.

Alfredo Ornano, of Genoa, Italy, had several pictures worthy of the highest praise. Nearly all were portrait studies with picturesque titles. The one entitled "Study" was more than creditable. It certainly showed great artistic knowledge with a technical training capable of carrying it out.

"Mother and Child," by Adelaide Hanscom, was a well-conceived arrangement of light and shade. There might have been some improvement in the style of printing, but, of course, too much can not be expected.

For daring pictorial effect there was nothing better than the "Rim of the World," by Charles E. Townsend of Oakland. The idea of the picture made it worthy of any artist. His "Yosemite in Storm" was also highly creditable while "Wha' Fo'?" could not be considered in the same class.

All of the work by Hana Robison of Berkeley showed itself to belong in the highest class. "Before the Gringo Came" was very good. The only objection was the use of the hackneyed title.



APPROACH OF A WINTER EVENING

First American Photographic Salon, San Francisco

BY CLARENCE G. DUDLEY

The daintiest bit of artistic portraiture that I have seen in a long time was the one of "Miss M.," by Charles O. Axell of Chicago.

Fred Riise, of Copenhagen, Denmark, showed "The Old Physician." It was a fine piece of work; worthy of all the other exhibits from that country, and the way of portraiture as good as anything I have seen. It was also very picturesque.

The small picture entitled "Pierrette," by Dr. W. J. Furness of New York showed a peculiar quality of atmosphere not common in photographs. And in this connection I will say that it is this quality that photographs lack. The work of a good painter impresses you with the fact that there is space around the person. In Whistler's portraits you feel that you can put your hand on the other side of the person's head. Most photographs are only half a head fastened tight against the background. And this objection is not one that cannot be overcome as was shown by several pictures in the Salon. All that is necessary is a careful study of values and an effort to put some texture into the background that will be different from the face.

The portraits of Allen Drew Cook, of Philadelphia, show this quality in a high degree. That is, some of the work does, but some has the quality I have just referred to and remind me of the full moon in space. The "Portrait of the Artist" was the best of the large portraits in the show.

Rudolph Duhrkoop, of Hamburg, Germany, had a collection of an even grade most surprising. There was no one picture that stood out from the others, but the entire fourteen belonged on the top.

Rudolf Eickemeyer sent a collection of his characteristic work. This work has a certain quality about it that gives it a place of its own, but from an artistic standpoint it has little value. The one entitled "Decorative Portrait" has not a single decorative quality in it, and the price attached, fifty dollars, is enough to buy a very fine etching by Whistler, one of the world's greatest masters, makes the whole effort ridiculous.

Another man who has some misconceived ideas of the value of his works is George H. Seeley. He places a valuation of fifty dollars on prints that are not worth fifty cents. I am saying this with the understanding that he classes them as works of art. But how can a reasonable man ask more for his work than men who are not only masters but leaders in the art world. Men whose work is absolutely original and not a print that can be duplicated by thousands at the cost of a few cents for each. The characteristic of Mr. Seeley's work shows an effort to imitate the work of the illustration. Some times he succeeds but more often he fails. The general aspect of the work is that of a feeble wash drawing. All are about even in tone but lack that one great essential—variety of texture. It might be said that in this work the different objects all seemed to be made out of the same material.

"Crepuscule" is the ambiguous title given to a nude figure by Haweis et Coles of Paris. There are some good points in the picture but it falls very far from being artistic.

Solon L. Gates, of Chicago, sent several very fine portrait studies. One entitled "Yvonne" had a great deal of artistic feeling displayed.

The exhibits by our own California workers were fully up to any of the others taken as a class. The work showed a certain strength and originality and that

it was a representative collection no one can doubt when it is known that the following were on the catalogue:

- Laura Adams Armer, Oakland, "The Laurels."
 Fayette J. Clute, San Francisco, "Golden Gate," "Off Goat Island."
 W. E. Dassonville, San Francisco, "Rotterdam," "Mistress A," "Portrait."
 John T. Diebels, San Francisco, "The Restless Sea," "Across the Golden Gate."
 Dr. Arnold Genthe, San Francisco, "The Lone Indian (Acoma)," "Mrs. Patrick Campbell."
 Adelaide Hanscom, San Francisco, "Mother and Child."
 L. M. Kaiser, San Francisco, "Marin Marsh," "Belfry Stairs, Carmel."
 Edward H. Kemp, San Francisco, "Walpi Maiden," "Rocks of Acoma," "Where the Silvery Colorado Wends Its Way."
 Herman S. Hoyt, San Francisco, "Along the Dock," "San Francisco Bay," "Indian Pottery Burner," "Pueblo Indian Bake Oven."
 Albert LeBreton, San Francisco, "The Ruined Chapel (San Luis Rey)," "Desolation (Baltimore Fire)," "Monument Grounds (Washington, D. C.)."
 Oscar Maurer, San Francisco, "On the Maas," "In Marin County," "In Amalfi," "The Stour at Canterbury."
 F. E. Monteverde, San Francisco, "Fish Cleaner," "Study in the Nude."
 W. J. Piatt, San Francisco, "Dusk."
 Hana Robison, Berkeley, "Portrait of a Boy," "Portrait," "Before the Gringo Came," "Study of Personality."
 Walter A. Scott, San Francisco, "Early Morning in the Woods," "An Elfin Trysting Place."
 E. N. Sewell, San Francisco, "In Chinese Fish Market," "Laying the Foundation," "Reflections," "In Mission Channel, San Francisco," "The Oyster Boat."
 W. J. Street, San Francisco, "Mount Tamalpais from San Francisco," "Mission Bay."
 Charles E. Townsend, Oakland, "Yosemite in Storm," "Rim of the World," "Wha' Fo'?"

A Correction re "An Enlarging Convenience"

The illustrations which came with Mr. Shepherd's excellent article under the above title in our last issue were redrawn in order to better fit the page. With the manuscript in the printers' hands and the cuts in the engraving shop it was impossible to compare them until too late. In Figure 1, B should be the cardboard and G the glass. In Figure 3, the springs are shown as screwed to the glass and gripping the paper. C should represent the bromide paper and the springs should be shown as gripping the two upper corners of the glass which is represented by the outer line on the board. The article describes a very convenient piece of apparatus and fortunately is in Mr. Shepherd's usual clear and concise style, making the errors in the lettering of the illustrations less important than they might otherwise have been. We are making the correction more in justice to Mr. Shepherd than through any necessity of making the matter clear.



THE OLD PHYSICIAN
by FRED RIISE

First American Photographic Salon, San Francisco



PIERRETTE
by DR. W. J. FURNESS
First American Photographic Salon, San Francisco

The Humorous Side of the Salon

By BEN TEROL

The old adage, that "strange things happen when you haven't got your gun," was more than once verified in the Maple Room of the Palace Hotel during the recent photographic salon.

One morning a solemn looking gentleman accosted me as I stood transfixed before an ultra impressionist production, and requested me to accompany him to one of his own prints in the "show." By close scrutiny, I observed that a small sliver had broken off from the corner of the frame. "I do wish you would have a search made for it," said the gentleman, "I will undertake to glue it on if it is found!"

It is not often that members of "the finest" intrude in photographic shows (as a rule), the study of art not being included in a policeman's curriculum, but a "blue coat" had to be called in one afternoon to quell a discussion between three well-known artists over a print designated in the catalogue as having "no title." One artist claimed it was a portrait of Orpheus, another insisted it was a marine, while the third maintained it was a picture of the burnt district in Baltimore (1904). The cop adjusted his monocle and decided it was not a proper picture to hang on the walls,—so the three artists and the print were all "run in."

Speaking of propriety, a very prim maiden lady handed one of the Hanging Committee a fig leaf shaped gum label with the request that it be made use of on No. 190.

The remarks about the prints were sometimes amusing. A young lady and her escort were looking at a print valued (in the catalogue) at fifty dollars. "Surely this is a mistake," said the young lady most seriously, "they must have meant fifty cents." "Dear at that," replied the escort.

"Isn't this a mistake?" remarked another looking at the picture of a lady making goo-goo eyes at a small dog. "Surely the title of this print should be, 'Kiss oo Mama!'"

"The Pine's Whisper" was also considered far fetched and somewhat obscure. Why not give the picture a title everybody could see the relevancy of, "The Dying Gasp" for instance.

Fortunately No. 272 had no title. Thank heaven for that!

A caustic critic remarked that if sentiment is the vestibule of art, then Seeley must have gone in by the back door.

Some pictures had much merit. The night they were unpacked, in the room adjoining the Maple Room, they could not be hung as a banquet was taking place in the latter room. A special watchman was employed to stay with the prints. No. 66, being considered so valuable that it might excite the cupidity of even the watchman, was locked up in the Palace Hotel safe. By the way, I am sorry to say the watchman became slightly inebriated. As an excuse he called our attention



A SHAFT OF LIGHT

First American Photographic Salon, San Francisco

BY S. G. KIMBER

to No. 270 the title of which read somewhat like this: "Drink, for when you're dead, you'll be dead a long time." The title (and suggestion) were unnecessary. The picture told its own story, and would drive any man to drink.

A coy maiden reading to her escort (from the catalogue) the title of No. 254, "He Never Told His Love," made a ten strike, for he immediately replied: "Well I will,"—and they forthwith sought a Davenport in the Marble Room.

As I have remarked the prints were fine. They were consigned to us at \$6,000—\$1,000 on each case. But on repacking them, we placed all of Curtis Bell's exhibit in *one* case, and were thereby enabled to reduce the valuation on the other five to \$375, making a grand total of \$1,375,—a great saving on expressage to the Portland boys.

The exhibition was largely attended. A number came several times. This was lucky for them as the Hanging Committee had unfortunately hung several frames upside down on the first day. Why will exhibitors neglect to indicate the top and bottom of their prints?

Several sales of No. 1 in the catalogue were in process of negotiation until it was found that the fountain-pen attached to the picture by a string involved seven and a half years subscription to *The Photographer*.



MISS M.
by CHARLES O. AXELL
First American Photographic Salon, San Francisco

The price of No. 102, we are informed, was originally thirty-five dollars, but the animal portrayed having undergone a surgical operation which seriously interfered with his utility, the price was reduced to fifteen dollars.

The sale of the catalogues was something surprising. Just why could not be discovered until a casual remark by a purchaser solved the problem. As he laid down his twenty-five cents he explained that it was rather extravagant but he had to know what could be the possible "motif" of a picture numbered 138d. The picture was moved to a more prominent position and the sale of catalogues further stimulated.

Townsend's "Storm in the Yosemite" hung near a window, and the realism of the picture kept the window sashes rattling and the curtains constantly agitated.

Another realistic picture was Morgan's "Jersey Meadows." A swarm of mosquitoes from Valverde constantly hovered around the frame.

Yellott's work began according to the catalogue, in the "Surf" and ended at "The Edge of the Woods." By this time he is probably in the deep fastnesses of the tall timber. The Federation is taking steps to procure a subpoena *duces tecum* in time for the next meeting of the Grand Jury.

People who thought the price (seventy-five dollars) placed on that large church interior too high should bear in mind that the expense attending the production of such a picture is very great. A detailed estimate of the probable cost is appended:

Salary paid 69 elderly men and women for sitting motionless 3 hours and 10 minutes, at 5 cents per hour.....	\$ 5.85
Laundrying 69 white bonnets.....	1.95
Two pounds of flea powder.....	.60
Consumption of candle grease.....	.42
Contribution to poor box (15 centimes).....	.03
One 31¼x41¼ Seed plate.....	.03
Chemicals (Gum pigments, etc.).....	.09
Canvas and use of bolting cloth.....	.28
For private criticism by Sadakichi Hartman, by mail (see ad.)...	1.00
One hundred and eighty hours labor, at 2 cents per hour.....	3.60
Twenty-five cubic feet of Philadelphia art atmosphere, at \$2.50, less 2 per cent.....	61.15
Total	<hr/> \$75.00

Some of those German titles sounded to the non-linguistic as though they had been run through a Wienerwurst machine. As near as we can remember they read somewhat like this: "Hors Concours Betrachten Wuerde," "Sehr Gehrter Herr," "Mit Verzueglicher Hochachtung," and the like.

Visitors doubted the correctness of some of these and wished to have the frames opened in hopes of finding the original titles on the backs of the prints. Their request was complied with, but unfortunately the titles were written in German, which neither Mr. LeBreton nor Mr. Clute could read. These gentlemen, in behalf of the San Francisco Salon Club, also repudiated any present connection with a sausage factory.

Colorprinte

Colorprinte is the invention of Dr. von Slavick, an Austrian army officer, perfected by Dr. Adolf Heseckiel. It is, as now manufactured, a paper for making photographic prints in the colors of Nature from ordinary landscape negatives. It consists of a paper coated with successive layers of colors in the order of the usual relative density of those colors on the negative. When printed that portion of the coated pigment which has not been acted on by the light is washed away in warm water which completes the print. The theory is that light passing through the negative reaches through the sensitized layers of pigment to the color representing the original color of the subject. In the high lights, such as the sky, the negative being dense, only such light will pass through as will reach the first coating which is light blue. On the contrary in the darker portions, such as foliage, those portions of the negative being more transparent the light reaches through the successive layers to the green which is next to the last coating.

As will be seen the working of the paper is of the utmost simplicity. In the form in which it is being placed on the market it consists of an ordinary looking piece of pigment paper which is sensitized by being placed for three minutes in an ordinary two and one-half per cent bichromate bath, or, preferably, in the sensitizing solution which is furnished by the manufacturers in concentrated form. It is then squeegeed to a ferrotype plate and placed in a dark place to dry. If this sensitizing is done in the evening the paper will be dry and ready for use the following morning. When dry it is sensitive to light in about the same proportion as ordinary gelatine paper so that it can be handled with impunity in ordinary subdued light. As there is no perceptible change during printing that is best accomplished by exposing a small strip of gelatine paper on one edge of the negative alongside the Colorprinte. When the gelatine paper has printed to the depth usually required for a good proof the printing is complete. The Colorprinte is then placed in a tray of cold water, allowed to soak for a moment and a piece of transfer paper (which is furnished with the Colorprinte in each package) placed under it and both removed from the water and squeegeed together. It is left for a few minutes and is then placed in warm water—about ninety-five degrees, though a thermometer is unnecessary because a difference of several degrees will make no difference in the print. In a few moments some of the red protective coating will be seen to ooze out between the Colorprinte and the transfer. The original paper of the Colorprinte can soon be removed and the print will have the appearance of a mass of dark red. It is then turned face down in the warm water when that portion of the pigment which is not affected by the light will dissolve and fall to the bottom of the tray. It can be turned face up and examined from time to time to ascertain when development is complete. Development usually takes about five minutes though it can be hastened by slightly warmer, or retarded by colder water. There is great latitude of exposure; if under-exposed colder water may be used, and warmer if over-exposed. As development progresses the operator will be pleasantly surprised by the appearance of one color after another as the warm water reaches to and dissolves the unexposed pigment above each color. When development is completed the print is thrown in cold water or a weak alum solution to stop development and is then ready to be mounted.

In operating the process will be noted to be similar to the carbon process but is much simpler in many ways. No "safe edge" on the negative or paper is necessary. In development no manipulation is needed, the best results being secured by allowing the print to remain face down in the water and work out its own success. Local development is unnecessary and harmful except possibly to work clouds in the sky just before development is completed.

No special negatives are required but good ordinary contrasty negatives will give a correct interpretation of the original colors of the view. The Colorprint now being placed on the market is for general landscape negatives. Owing to the fact that many of the shades of red and green photograph with practically the same density on the negative, special paper for portrait work is required, which it is hoped will be on the market in the near future.

American Photographers

The Quarter Centennial of our Association will, beyond the shadow of a doubt, transcend any meeting of like kind ever held on this continent, and you are urged for Art's sake and for the sake of that true comradeship which is such a delightful incident to artist life, to bring your wares to the show and to shake hands with the best of your fellows.

The show place, the Mechanics' building, is the best adapted of any structure in the whole country for the purpose of a photographic exhibition. It is indeed a faultless interior and is perfectly suited to our needs, as though it had been built by one of us, for us.

And be assured that the people of Boston, that city deservedly known for near a century as "the Athens of America," know just how to treat the stranger within their gates; and with the first cordial greeting, forever dispel the notion that he is a stranger.

Don't you want to try for the prizes? Don't you want to receive words of kind and just praise in commendation of your work, from men whose praise is indeed an inspiration? Don't you want, in a beautiful and historic city, in one of the noblest structures, to see, to learn, to grow?


Every detail for the success of the meeting is being carefully wrought out. If you prize your art, and wish to see its best possibilities develop, come to Boston and see, and contribute to the rich store of the beautiful scenes and faces and forms reproduced from the life of the times in which we live.

Cordially and respectfully,

A. T. PROCTOR,

Second Vice-president Photographers' Association of America.

"The Market" which we reproduced on page 222 of our last issue should have been credited to Alvin Langdon Coburn. The mistake is ours and apologies have been tendered.



CAMERA CRAFT

ISSUED MONTHLY BY

The Camera Craft Publishing Company

114 GEARY STREET. SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. X

SAN FRANCISCO, CALIFORNIA, MAY, 1905

No. 5

The First American Salon In San Francisco

Practically unannounced, certainly unheralded, the presentation of the First American Salon in this city was a grand success in every way. April 7th, 8th, 9th and 10th were the dates on which the pictures were on exhibition at the Maple Room of the Palace Hotel. No admission was charged, admission being by card, and the catalogue was not burdened with cheap reproductions and advertising matter. Cards of admission were in such demand that they were returned to the holders and used repeatedly. The attendance, particularly in the evenings, amounted to almost a crush and the demand for catalogues far exceeded the expectations of those familiar with like exhibitions in the past. Exactly fifteen days elapsed between the wiring of the Chicago Camera Club that they might ship here, and the delivery of the cases to the express company marked for shipment to Portland. While feeling proud of being instrumental in the success achieved, I wish to acknowledge my indebtedness to my co-worker, Albert J. LeBreton. It was only his assurance of assistance which inspired my final message to Chicago instructing shipment here instead of Portland direct. Enthusiastic and untiring, his executive ability, his experience and his tactful personality forced success under conditions that would have been appalling to one less resourceful or less sincere. Jointly, we wish to thank those whose financial assistance was even more important, and, speaking for all interested, we thank those whose kindly feelings and willing hands made the work of unpacking, hanging and repacking more of a pleasure than a task. The list is too long for this page but Mr. LeBreton will attempt to do justice to the matter in another part of this issue.

Our Report of the First American Salon

CAMERA CRAFT, in this connection, is fortunate in being able to present to its readers an article from the pen of a gentleman whose ability as a critic is undeniable and whose opinion carries more than ordinary weight. Mr. Sparks received his art training in the same school and at the same time as did several of the

gentlemen who composed the jury in New York. As instructor in our School of Design his reputation needs no exploiting and in even a less degree does his treatment of the subject call for any apologies or explanations on our part. The article on another page is the straightforward expression of the honest convictions of a gentleman capable of judging and competent to teach. We trust his efforts will be appreciated.

Our Department of Criticism

The announcement in our last number seems to have met with the hearty endorsement of our readers, as a number of prints have come to hand in the few days that have elapsed between the mailing of that issue and the writing of this paragraph. The time however was too short to allow the preparation of the blocks and the writing of the criticism. As the work makes its appearance the number of prints submitted will no doubt grow greater, and while we will refrain for the present from imposing any restrictions as to number of prints, I would suggest that portraiture, still life, genre, and the like will stand a better chance of receiving our critic's attention than will landscape work, for the reason that the latter are almost certain to be submitted in greater abundance. Repeating our words of last month: "Select some print that you think is good, or that has been admired by your friends, mark it for criticism and send at the same time a few others of your average productions. Address: The Critic Editor, CAMERA CRAFT."


Free Cameras at the Lewis and Clark Centennial

We are advised by John A. Wakefield, director of concessions, that while nothing official had been done by the committee having such matters in charge, he felt sure that the Exposition would not take advantage of the clause in its concession agreement to charge for the admission of kodaks and other cameras. The clause referred to and which is self explanatory, reads as follows:


"It is mutually agreed and understood that this concession does not cover the taking of stereoscopic views, views for guide-books or any tourist camera or kodak privileges; it being understood that the Exposition reserves the right to grant concessions for the taking of stereoscopic views and reserves all the right to take in charge the admission of tourist cameras or kodaks and to receive all the revenues derived therefrom.

"It is further understood and agreed that the Exposition may, if it so elects, grant the free admission and use of tourist cameras or pocket kodaks without tripods; said tourist cameras or kodaks however, shall be restricted to the taking of pictures of no greater width than four inches and no greater length than five and one-half inches."

As will be seen, this is made to include the popular 3A Folding Pocket Kodak which we feared was restricted when advised in an earlier letter that four by five and smaller cameras would be admitted free to be used without a tripod. It seems that the precedence established in St. Louis and which CAMERA CRAFT's Editor was instrumental in establishing, will be regarded in future Expositions. The wisdom of so doing has been established. In our next issue will be found an article that, in a measure, hints at the possibilities which the Lewis and Clark Centennial will offer to the camera users so fortunate as to be its visitors.



A Photographic Digest



By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

The Range of Graduation in Various Printing Processes

No subject is of greater practical importance to the photographer than a knowledge of how best to secure (or it may be suppress) the various gradations of light and shade represented by the different densities of his negative. We all know that of the long series of shades that the eye can recognize in the transition from intense sunlight to utter darkness only a very few are recorded by the best of correctly exposed and well-developed negatives. Of the visible tones in such a negative some almost invariably disappear in the process of printing, be that process what it may. How to reduce this loss to a minimum, or accentuate it in given cases, is to possess a command over results that often turns failure into success. This subject has recently been carefully investigated by Mr. William Goodwin, and his results published in the transactions of the Edinburgh Photographic Society, and the paper is reprinted in the March number of the *British Journal of Photography*.

To several of the results obtained I would draw the attention of our readers. Some time ago I published a paper in this journal advocating the production of enlarged negatives from carefully prepared positives on Solio paper without toning or fixing. Mr. Goodwin, speaking of the reproduction of the high lights on printing-out papers, says:

"It will be noticed that the gradations print out clearly enough, but that they disappear or are disproportionately reduced during toning and fixing." So that in these scientifically conducted experiments I have a confirmation of the advice I tendered on the

results of empirical observation. Speaking of the P. O. P. as a class, the author finds that they do not give a correct rendering of the negative. Concerning Bromide Papers he says:

"Under these conditions, when development is carried to the point at which all further action ceases, the majority of the papers I have tried give seventeen tints, equaling a range of gradation in the negative of 1 to 128; one gives a very short range, fourteen tints, equaling 1 to 48 (that is one of the older brands); another gives fifteen tints, equaling 1 to 64; and another sixteen tints, equaling 1 to 96.

"Thus it appears that most of them are quite capable of dealing with negatives of normal contrast, such as are suited for P. O. P. It has to be noted, however, that bromide paper is subject to rapid falling off in contrast toward the ends of the scale even to a greater extent than P. O. P., and it is doubtful if some of the tints at the ends would be distinguishable from each other if scattered about as in print.

"The very remarkable influence of chromic acid or a bichromate on gradation calls for notice. In this country it was first described by Mr. John Sterry, but I believe the discovery is claimed by the German Professor Namias. Exposure is given sufficient for the highest light, and by treatment with very dilute chromic acid or bichromate solution previous to development the over-exposure of the shadows is corrected. I show you examples of long exposures behind my screen, one developed normally, the other treated with 1/1000 chromic acid for two minutes. The first, of course, shows the normal number of tints for the paper, followed by long tracts

of uniform black; the second shows gradation throughout, indicating that it could print from a negative of gradation reaching to thousands—far beyond the possible gradation of any ordinary plate. In preparing these examples I have continued the action of the chromic acid too long, thus losing one or two tints in the lights, but with proper adjustment that would not happen.

"Excess of bromide in the developer shortens the scale considerably, but, as in the case of plates, it must be present from the beginning. Examples Nos. 7 and 15 show that, even with amidol, two grains per ounce of bromide shortens the scale two or three tints, thus enabling a thinner negative to be used. With a harder-working developer, such as hydroquinone, of course the shortening would be greater still, but it must be remembered that there is a limit to the permissible quantity of bromide, as the color of the image becomes disagreeable when over-restrained. The composition of some developers used for bromide papers rather puzzles me. The idea seems to be to add alkali to make it strong, and then bromide to make it weak. A developer such as amidol, which will work cleanly with little or no bromide, seems more rational, and avoids any shortening of the scale.

"The time of exposure influences the character of the gradation. Long exposure flattens the print by fully exposing the lights and giving full detail, while it over-exposes the shadows, causing them to decrease in contrast. Short exposure allows full contrast in the shadows, but loses detail in the lights. The distance of the light or strength of the light has also an influence. Powerful illumination reduces the effect of under-exposure in the high lights and increases the over-exposure in the shadows, while weak illumination has the opposite effect."

Platinum papers are found to give a longer gamut of tones than the printing-out papers. This, I imagine, is not generally recognized. The most valuable of Mr. Goodwin's observations are those concerning carbon printing, of which he says:

"It is a peculiarity of this process that its range of gradation is variable at will, over fairly wide limits, by varying the strength of the sensitizing bath. An average bath of four to five per cent of bichromate will give a range about the same as the majority of the P. O. P.'s, but for such a gradation a

negative of a considerable range of opacities is needed to bring out the full value of the rich deep shadows which are characteristic of the process. If, however, the tissue is sensitized on a bath more diluted, the range of gradation is shortened and rendered much steeper, and the negative may be correspondingly thinner. On the other hand, tissue to suit a negative of extreme contrast may be prepared by sensitizing on a bath of greater strength up to about eight per cent. Beyond that strength trouble arises owing to crystallization of the bichromate in the film, and even at eight per cent I have noticed signs of it.

"The gradations I have obtained are:

8 per cent bath.....	1 to 64
4 per cent bath.....	1 to 32
1 per cent bath.....	1 to 16
½ per cent bath.....	1 to 8

But these show carbon at its worst, as they refer to tissue twelve hours after sensitizing.

"I regret that gloomy weather has prevented me from finishing my experiments with this process, but it is known that its range of gradation increases with keeping, and it is usually supposed to be at its best about four days old, when it probably is about equal to P.O.P.

"NOTE.—Since reading the paper I have made further experiments, and find that after keeping the sensitized tissue five days the scale increases approximately as follows:

8 per cent bath.....	1 to 96
4 per cent bath.....	1 to 48
1 per cent bath.....	1 to 24
½ per cent bath.....	1 to 12

And after ten days—

8 per cent bath.....	1 to 128
4 per cent bath.....	1 to 64
1 per cent bath.....	1 to 32
½ per cent bath.....	1 to 16

PRINTING PROCESS AND GRADATION

"The tissue was kept in an airtight tin, and the temperature did not exceed 45 degrees during the period of keeping. In warmer weather it would probably "ripen" more rapidly. It is important, therefore, in controlling results with carbon to pay attention to the age of the tissue as well as to the strength of the bath.

"The general character of the process seems to be that the detail in the higher lights is

robust owing to the absence of any abnormal falling off, such as I have described in speaking of P.O.P., while in the shadows contrast is well maintained almost to the last gradation. There is, however, a little of the flattening already described, owing, no doubt, to the light having to penetrate more and more of the opaque tissue the greater depth of shadow.

"To some extent its characteristics must vary with the opacity or covering power of the pigment used, and the quantity of it in the tissue. I have used in my experiments black tissue, but for comparison have also tried sea-green and terra-cotta without finding any important difference in gradation. There is, however, the difference due to color-contrast, the red print being, of course, distinctly lighter in tone throughout.

"It is generally understood that for carbon printing with a normal four or five per cent bath, a "plucky" negative is required, yet it seems that the range of gradation and steepness is much the same as P.O.P. I think the need for a contrasting negative is due to the very vigorous rendering of detail in the lights, necessitating a corresponding vigor in the shadows; that is to say, the negative should employ a large part of the available gradation, otherwise the print may appear flat owing to the comparative strength of the detail."

Varnishing Prints and Paper Negatives

In these days when paper negatives for enlargements are again coming to the fore, the following notes on varnishing from the *Journal de Photographie Pratique Photographie*, January 2d, may be useful:

HOW TO VARNISH A PRINT

An excellent varnish for this purpose is the gum dammar one, but it should be more dilute. Half an ounce of the gum to ten ounces of the benzine will be found most suitable. This varnish is particularly suitable for large prints which are going to be framed. The print is first stuck down upon a stiff card, and is varnished when it is thoroughly dry. It requires a little dexterity, but this is soon acquired. This is how we do it. The varnish, carefully filtered and quite clear, is poured into a bottle with a fairly wide mouth, which is closed with an ordinary cork. This cork is pierced with two holes and fitted with two small glass

tubes. One of these tubes extends to within half an inch of the bottom of the bottle, and projects about half an inch outside. The other tube, with its end drawn out and curved round in the flame of a spirit lamp, only passes a very little way into the bottle and has its outer end projecting two or three inches from the cork. The mounted and dry print is held in the left hand and the bottle of varnish in the right, and a sufficient quantity of the varnish to cover the print is poured out by means of the drawn out end of the tube. This is made to cover the whole print by a movement of the left hand. Care should be taken not to pour out too much varnish, and when the print is completely covered, it is tilted a little and the excess is allowed to run into another bottle provided with a funnel and a filter, the contents of which after filtration are returned to the first bottle again.

VARNISHING UNMOUNTED PRINTS

Unmounted prints can be coated with varnish in the same way, by attaching them by means of drawing pins to a flat board which is tilted to an angle of about forty-five degrees. The varnish is poured over the print, starting at the top, and by a backward and forward movement the whole is covered. Great care has to be taken not to let any of the varnish get on the back or it will cause marks which will not disappear on drying, and will be especially visible in the lighter portions of the picture.

AN IMPORTANT POINT

A matter to be noted in making this varnish is that the benzine must be perfectly anhydrous; any trace of water in it will cause the varnish to dry matt in parts.

A WATER VARNISH FOR PRINTS

Prints which are to be mounted with white margins may be protected with a water varnish applied cold. For this purpose thirty grains of borax and thirty grains of bleached shellac are taken to each ounce of boiling water. The mixture is boiled for from two to three hours, adding fresh water to replace that which boils away. The liquid is then cooled, filtered and bottled for use. To varnish a print with this preparation we need not wait until the print is perfectly dry. After fixing and washing is complete, it is put between absorbent "fluffless" paper to remove the excess of moisture. After leaving it there for a few minutes, it is taken out

and immersed bodily in the water varnish for five minutes, and simply hung up to dry. It is then ready for mounting. This treatment has the advantage that it renders the paper throughout completely impermeable, and therefore is a thorough protection to the print. It also greatly facilitates mounting, for the print no longer expands to any extent on moistening, and the moisture of the mountant does not penetrate the paper and make the film itself sticky, which is so often a great trouble to amateurs when mounting bromide prints.

Watkins Pinhole Lens

It is interesting to note that the method of pinhole exposure first described by me in *CAMERA CRAFT* more than two years ago is slowly becoming general, and has been adopted by Mr. Watkins (of meter fame) in the little pinhole lens he has just placed on the market, which is thus described by *Photography*:

"It is a wooden circular disc, cloth covered, with two springs by which it can be inserted and gripped in the flange of any lens, the cloth making a light-tight joint with the lens front. There is a hole in the middle of the disc, across which is fixed the metal plate in which is pierced the pinhole, and a circular disc revolving on a pivot at its outer edge acts as a cap.

"To calculate the increased exposure with the 'Watkins Pinhole Lens,' the extension of the camera, from the plate to the pinhole, is measured in inches, multiplied by six, in the case of pinhole No. 6, and the result treated as if it were the f number of a lens, except that the exposure is read in minutes instead of seconds. Thus with a No. 6 pinhole and an extension of ten inches, we find the exposure for a lens working at $f/10 \times 6 = f/60$. This, let us say, proves to be three seconds for the particular subject to be photographed. Then we know that with the pinhole we must give an exposure of three minutes.

"The book of instructions gives the following useful hint as to arranging the subject. It says that as the image can only be seen on the focusing screen in very brilliant light, therefore, having leveled the stand, turn the camera around, and lifting the focusing screen, apply the eye to the pinhole and see if the view wanted is framed in the end of the camera. Then turn camera around again for the pinhole to face the subject.

"The 'Pinhole Lens' is only stocked in one size—No. 6, price 1s. 6d., but any size of hole can be had to order."

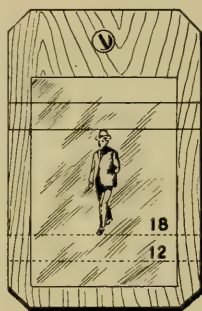
To Estimate Distances for the Hand Camera

To the Editor of *THE AMATEUR PHOTOGRAPHER* (English): SIR—Many of your readers possessing focusing hand cameras will no doubt have experienced considerable trouble in estimating distances correctly, and it is apparently no easy matter even for an expert.

To my own camera, however, I have fitted a most convenient little device, which, as far as figure studies are concerned, entirely overcomes the difficulty.

A small piece of celluloid, about one-thirty-second of an inch thick, is cut to the same

shape as the view finder, but slightly larger in size. It is screwed to the camera by a single screw, as shown, so that when not required for use it may be swung out of the way. Ask a friend of average height (say five feet six inches) to stand at given distances; in my own case




I have chosen twelve, eighteen, and twenty-four feet as being the most useful for general work. Mark off the heights on the celluloid, and rule horizontal lines across with some sharp instrument. The distances can easily be scratched on the celluloid, so that they may not be forgotten. The rest is simple. Suppose you are taking a group of figures walking toward you, set your focus to eighteen feet, wait till the image or the figures on the finder just fits between the lines corresponding to eighteen feet, then press the button. The result will be a photograph in perfect focus.

I took a number of pictures, using this device, some few weeks ago, and was successful with my focusing in every case.


I may say that I have fitted the arrangement to both the horizontal and vertical finders (which are of the brilliant pattern, by the way); the horizontal is marked for twenty-four feet, and the vertical for twelve and eighteen feet, very suitable distances with my six-inch Cooke lens.

Yours, etc.,

BERTRAM C. JOY.



The Amateur and His Troubles



By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

Hypo Eliminator

A correspondent in Kentucky asks for a hypo eliminator. To be candid there is nothing like good old-fashioned water to remove hypo, but several formulæ are quite satisfactory. One that works quite satisfactorily is compounded as follows: Reduce five ounces of barium dioxide to fine powder and then add it gradually to a mixture of five ounces of glacial acetic acid and fifteen ounces of water. Some shaking will be required to cause the powder to dissolve completely. Five minutes soaking in this should remove all hypo. "Figures, Facts and Formulæ" says: "Potass percarbonate is the best chemical destroyer of hypo. Rinse the plate from the fixing bath, cover with clean water, and add three to five grains potass percarbonate for every quarter plate. Rock, remove plate when liquid ceases to effervesce, and wash for five minutes." For my own part I should prefer the first.

What A Figure Can Do

Talking about introducing a figure or figures into a landscape, did you ever notice how so doing will cover up minor faults in the composition. Hand your critical friend a pure landscape and he will at once dilate on the faults in the arrangement of line and disposition of mass. Place a figure in the foreground, see that it is rightly located and he will at once lose all track of the composition. The same rule holds good with less acute observers. Do not understand me to advocate the use of figures to cover up sins in this or that direction but it is a fairly reliable rule that the use of an appropriate figure rightly placed will often do much toward making a picture of

what would otherwise be simply a subject for discussion as to the right and wrong disposition of the several parts. I am not going to discuss the use of figures but simply wish to jot down this one peculiarity concerning their introduction.

Using Old Developing Paper

A friend came to me the other day with some prints that were about as bad as I had ever seen. He complained, or, rather, explained, that they were simply made as proofs, using up a portion of some old developing paper that had deteriorated on his hands. I know that most of the developing papers will keep for almost an indefinite time if not exposed to light and the atmospheric conditions are not abnormal, and, asking how he had gone about the development of the paper, I found, as I had expected, that he had proceeded just as he would have done with paper fresh from the maker. He tried a little different way of working a few days later and secured some fine prints, much to the surprise of my friend. The main thing is to get the developer restrained just enough and no more than is necessary to keep the high lights clear. To do this is simplicity itself. We first determine that development should require not more than forty-five seconds. Then it is simply a matter of restraining the solution until an unexposed strip of the paper would not gray over when immersed in the developer for that length of time. A ten-per-cent solution of cyanide of potassium was prepared and, thus equipped, a developer was mixed up. To the developing solution was added a few drops of the ordinary ten-per-cent bromide solution, then a few drops of the cyanide solution, and so on

until it was found by repeated trial that the unexposed strips remained clear for the requisite forty-five seconds. This arrived at, the next matter was to so expose the paper that it would develop in a little less than the time allowance decided upon. Of course a longer exposure was demanded than when working under ordinary conditions, owing to the large amount of restrainer used. The addition of the cyanide solution in connection with the bromide permitted of more restraining without the greening of the blacks or the yellowing of the whites that would have resulted in case bromide alone or cyanide alone had been employed. It might be well to mention that the cyanide is a rank poison and should be handled carefully, but diluted as it is after being added to the developer it is practically harmless, except it be taken internally.

Painting a Background

A correspondent in this State asks how he can go about painting a background, what to size the cloth with and how to make a good flat paint. The best sizing to use is that which he can buy at any paint store. Dissolved in boiling water, it can easily be applied with a brush while hot. For the paint he has but to scrape up a pound bar of common yellow soap, and, heating it with a quart of water, stir until a jelly results. Into this gradually pour a couple of pounds of the desired paint, stirring constantly as before, and continuing until a perfectly smooth compound is secured. This is applied to the sized cloth and the surface stippled smooth with a stiff brush.

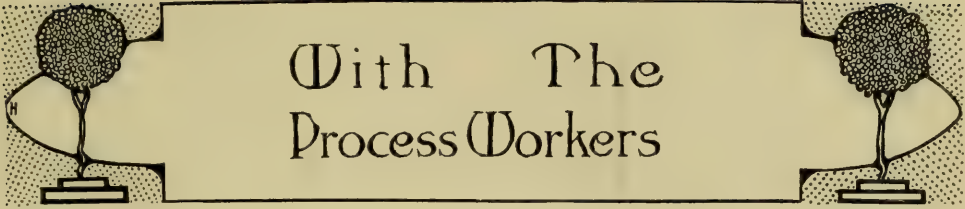
Fixing Bromide Prints

Few workers seem to realize fully the importance of perfect fixation of their bromide prints. As long as spots and stains are avoided they give little thought to the matter. The permanency of the prints depends upon thorough fixing much more than it does upon the complete elimination of the fixing salt. Danger of partial fixation is easily overlooked. This is particularly the case when an acid bath has been used or acid has been added to the bath. Hyposulphite of soda is a rather unstable chemical, and the addition of an acid to a solution of the salt will at once cause the hypo to decompose and liberate sulphuric acid, which is detrimental

to the permanency of the print as well as weakening the bath for its duties as a fixing medium. Besides all this, it is well to remember that the effect of the acid on the gelatine film is to harden it and to that extent make it less impregnable to the action of the hypo. This solution of hypo, in its turn, must not be denied time in which to perform its double task of first converting the unaffected silver into a soluble salt and then assist in the dissolving of this compound. The use of bisulphite of soda as an addition to the fixing bath has much to recommend it over the too common practice of adding both alum and an acid.

About Those Salon Prices

The first American Salon was shown in this city recently, and one of the things that interested me most was the prices attached to some of the prints. For instance, I recognized several that had fancy prices after their titles in the catalogue, some that I knew could be bought in the art stores in the maker's home city for a fractional part of the figures mentioned in the catalogue. Such figures may be partially justified by the fact that others no better were priced even higher. At the same time, I believe the fault was not owing to any desire to be unfair, but simply a fear on the part of the makers that their prices would look too low in comparison. This was no doubt their prime incentive in marking them as they did. On the other hand, I do not see how the maker could conscientiously accept ten or fifteen dollars for a print, duplicates of which he would be pleased to furnish to the ordinary buyer for a dollar or less. Take my own prints, for instance: many of my friends seemed to think that my listing them as "Not for sale" was a desire on my part to either give them an additional value or to intimate that I was above selling my productions. Such was not the case. Prints from the negatives have been at the disposal of my friends on the newspapers, and in several cases the same prints have been included in collections for which I received less than a dollar a print. I certainly did not wish to list them in the catalogue at seventy-five cents, and I could not run the risk of having some one buy a copy for several dollars afterward, finding that others could duplicate his purchase for a much less amount. For that reason they were "not for sale."



By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

A Stop for Vignetting

A new form of stop for half-tone work has been designed in the Klimsch laboratories by Herr Otto Mente and Dr. P. Schumacher, with the object of obtaining a design of aperture which would permit of the same stop being employed for different degrees of reduction. The form of the new aperture is circular, with radial slits projecting from it. The diameter of the open central circle is considerably smaller than that of a stop as usually employed, and the slits, which provide a certain vignetting action, extend within a circle corresponding in diameter with that of the customary stop. A set of three stops of this form is stated to be equal to all the ordinary requirements of half-tone reproduction. The dot formation is found to be equal to that by the usual methods, but the exposure can be cut down to half or three-quarters the usual time.

Ink Prints from Gelatine

W. E. Noble, Atchison, Kansas, writes: "I am a photographer, but not an engraver. I wish to be able to make some special reproductions in printer's ink, such as views on postal cards, letter-heads, business cards, etc., without the use of zinc or copper; think the process is called photogravure. Anyway, it is the gelatine process. I have nearly everything in my gallery for photographic work and do not want to add the zinc unless it is necessary."

Answer: Judging by your letter, it would appear that your demand could be filled by what is known as the "collotype" process.

The results are satisfactory, but, as the materials have to be imported from England, there might be some objection. If you wish to go into it yourself, you had better take up the autotype process, which is old and perfectly reliable as well as cheap. Following is the formula, and a little practice should enable you to produce good results:

Coat clean glass with

Albumen.....	150 grams.
Potassium bichromate.....	3 grams.

Dry in oven at 110° F. Lay face down on black velvet, and expose to light until albumen is insoluble. Coat with following:

Gelatine, soft.....	160 grams.
Ammonium bichromate.....	30 grams.
Water.....	2400 c. c.

Dry again at 110° F., and coat with:

A

Gelatine.....	75 grams.
Water.....	1000 c. c.

B

Isinglass.....	75 grams.
Ammonium bichromate.....	18 grams.
Water.....	1000 c. c.

C

Chrome alum.....	10 grams.
Potassium bicarbonate.....	2 grams.
Water.....	2000 c. c.

Mix A and B, and to each 100 c. c. add 2 c. c. of C. Flow and dry the plate as before. Expose in shade under negative for ten minutes. Immerse in water until colorless, wipe

off with sponge, and ink with a lithographic printer's hand roller and lithographic ink. You can make prints on thin paper by rubbing over your hand, but if you wish to turn out any quantity of work you will have to have the proper press, etc.

Stripping Dry Plates

A. C. Drummond, Sacramento, asks if there is a method of stripping dry plate films. Like every one else he has found the use of the so-called "stripping solutions" very slow and unsatisfactory. *Answer:* The stripping of duplicate films is very little more work than stripping wet plates when a man gets a little facility in it. In fact, it takes less actual time than it does to strip a wet plate and is free from some of its troubles. The film being tougher is less liable to breakage. I strongly advise the use of a prism for reversing, but if you wish to strip here is a formula that will work with almost every plate. Develop and fix the plate in the usual way. Unless you wish to keep the negative it is not necessary to wash it for more than five minutes. Then put it into a solution of

Formaline	1	drams
Sodium Carbonate	30	grains
Water	1½	ounces

Leave in this solution for about seven minutes, then stand it up to drain for a minute. Now immerse in a solution containing one dram hydrochloric acid and one and one-half ounce of water for about a minute. The film should, of course, be cut around the edge, just the same as if for a wet plate. It will readily peel from the glass.

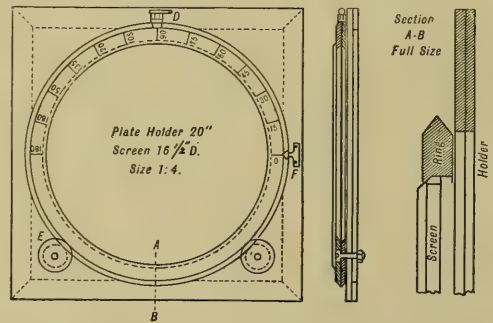
Screens for Color Work

Max Levy, the famous manufacturer of line screens, has written the following article which is of the greatest value to the process worker:

The rapidly increasing interest in color work prompts me to write again on the characteristics of screens best adapted to the purpose. In a former study of the subject the balance of advantage was shown to be in favor of a pair of screens ruled at the proper angle. Since then the subject has been further developed and now facts favor the use of a screen of circular form, properly mounted.

The increasing sizes of the plates demanded in three colors impose greater difficulties than ever in the use of screens in pairs, and the increasing fineness of the ruling adds to these difficulties. * * *

Only two objections have been urged against the circular screen: One, the difficulty of turning in the holder or camera, which is purely mechanical and can be readily overcome, and when overcome in the manner suggested affords a further advantage over any other existing method in the complete protection of the screen from the silver solution, and the larger measure of further protection from accidental injury through jar or other causes. I have recently designed the arrangement shown in the drawing, and have constructed a special lathe for turning the aluminum rings up to seventy-two inches in diameter. In this arrangement the screen is carefully fitted and cemented into a ring turned from an aluminum casting, and this ring is arranged to rotate upon two friction rollers



and a friction clamp, all of which are mounted upon a framework carefully built up of sheet aluminum and properly braced. The ring is graduated half-way around, the gradations being fifteen degrees apart, and a pointer is mounted upon the framework by which the angle is read off. The direction of the rulings is carefully marked upon the screen, and one of these rulings is made to conform to 0° and 180° on the circular frame. A screen 40 inches in diameter, made for my exhibit at the Louisiana Purchase Exposition (St. Louis, 1904) is mounted in this manner, and moves with the greatest possible freedom and precision, so that in using such a screen there need be no fear whatever of any error in the angle of the rulings in resulting plates.

I shall now take up briefly the chief obstacle in the way of the use of the circular screen. This is the extra large size of camera and plate-holder required. The effect of this

disadvantage is reduced by placing the screen in the camera instead of in the holder, the former being the English and Continental, the latter the American practice. I am able to say at this time that the difficulty is substantially, if not entirely, removed by an ingenious contrivance I have seen, in which a plate-holder of the normal size for the required plate is employed in connection with a circular screen and framework considerably larger, the screen and framework being mounted in the back of the camera with ample provision for cleaning the screen without removing it from the camera. I am unable to give full particulars of this device at present, as the inventor is not yet ready for publication.

Making Three-Color Filters

Various methods of extemporizing a cell for use as a liquid light filter have been described from time to time. The favorite form is that which is made by clamping a circle of india-rubber tubing between two sheets of patent plate glass. The ease with which it may be taken to pieces facilitates the cleansing of the cell when it is necessary to change the dyed fluid, and the inexpensive character of the materials of which it is made is not its least recommendation.

The writer has found that the substitution of a flat piece of india-rubber, cut to the size of the glass walls, and with a circular opening cut out of the center of the india-rubber slab for the purpose of containing the fluid, to be a slight improvement upon the india-rubber tubing. Suitable sheet india-rubber may be purchased of any reasonable thickness, and this facilitates the manufacture of a cell of any given internal thickness. This is an advantage, as it insures that the absorption properties of a layer of liquid may be standardized, and then identical light filters may be obtained at will.

For the purpose of clamping the india rubber between the glass plates the writer uses four brass spring clips, two of which are placed at the top and two at the bottom of each side of the cell. The spring clips must be strong, as it is necessary to exert some pressure upon the india-rubber in order that the cell may be water-tight. It is an advantage to smear the faces of the india-rubber slab with vaseline or tallow; these may in course of time attack and destroy the india-rubber, which, however, is easily replaced. Flat india-rubber rings, which are made of

various diameters and thicknesses for packing the glands of engines and boilers, may be substituted for the slab of india-rubber.

Coloring Photographs for Three-Color Process

Both bromide and silver papers are used for the purpose of making three-color cuts, but it frequently happens that the artist has great difficulty in getting the water color to stick to the paper. The following methods will be found to work with great satisfaction. For bromide paper prepare the following solution:

Purified oxgall.....	30	grs.	30 g.
Glacial acetic acid.....	30	m.	30 c. c.
Distilled water.....	3½	ozs.	350 c. c.
Methylated spirit.....	1½	ozs.	150 c. c.

Shake till dissolved, filter, paint over the print, and allow surface to get dry, and mix the paints with a drop or two of this solution also.

When it is desired to tint or touch up a glossy silver print with water-colors, the resistance offered by the shiny surface can be overcome by treating it with the following solution:

Albumen.....	6	drachms
Glycerine	1½	drachms
Ammonium carbonate.....	15	grains
Ammonia, .880.....	1	drop
Water	1½	drachms

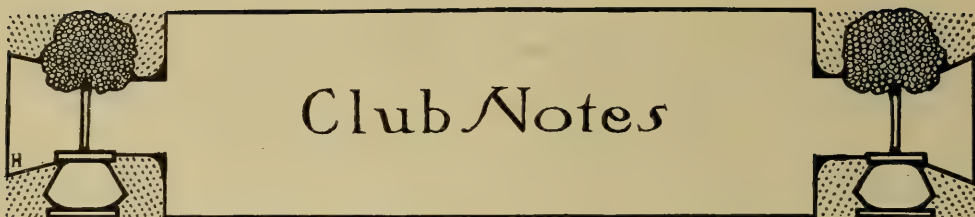
First thoroughly incorporate the albumen with the water, and then add the other ingredients. If oil-colors are to be used, the print should be coated with a mixture of gelatine and gum arabic.

Varnish for Prints

A waterproof varnish for prints is wanted by a reader in Iowa. Celluloid dissolved in amylacetate is a good protection to the surface of prints, and the following is a highly recommended varnish much used on the other side for the protection of maps and prints of that character:

Borax	30	grs.
Pale shellac.....	60	grs.
Sodium carbonate.....	10	grs.
Glycerine	30	mins.
Water	1	oz.

Boil for nearly an hour, then allow to cool down and add one ounce of alcohol and a little pumice stone. Shake well, let settle and then filter.



News Items From the Various Camera Clubs

By BEN TEROL

The California Camera Club Election

The California Camera Club held its annual meeting on April 11th. Reports of different officers and committees were read, and an election of officers for the ensuing term took place. The regular ticket went through without opposition, except in the case of one of the nominations for Director. A friendly contest took place over this office, the friends of Mr. F. E. Peterson presenting his name as a candidate, and easily winning out. Those elected were: President, E. G. Eisen; First Vice-president, H. B. Hosmer; Second Vice-president, J. W. Erwin; Recording Secretary, W. E. Dassonville; Corresponding Secretary, H. G. Aylsworth; Treasurer, J. J. Lermen; Librarian, G. Knight White. Directors: Albert LeBreton, F. J. Clute, F. C. Bangs and F. E. Peterson.

Third Annual Exhibition of the Buffalo Camera Club

The catalogue of this exhibition reached us recently and was somewhat of a surprise in the beauty of its make-up. Six fine photo-gravures on Japanese tissue embellish the thirty-two pages of heavy, cream-laid, deckle-edge stock. It is beyond a doubt a great improvement on the ordinary exhibition or salon catalogue with its more commercial style of printing. Concerning the Club, Mr. Spencer Kellogg, Jr., writes:

"The Buffalo Camera Club is one of the most enthusiastic organizations of this kind in the country, and is coming very rapidly to the front. It has several well-known workers in its membership. For many years the Club slept peacefully and only carried on the work in a desultory manner. Renewed enthusiasm was caused by several of the younger members taking a vigorous hold on its affairs, and consequently the exhibition of

this year has proved to be an exceptionally fine one.

"There are eighty members in the Club. The plans for the future contemplate the opening of another like salon about a year from this date, and prints from all the best amateur photographers in the country will be invited and will be passed upon by a competent jury, and it is promised that it will be an honor to be represented in this exhibition. The Club also contemplates a class to educate members and non-members interested in photography. In this way it is hoped to increase the membership of the Club very much, and at the same time furnish new material for future exhibitions. The scientific side of photography is not being neglected, and some of the best-talented men in Buffalo will be booked for scientific readings and demonstrations of various subjects of universal interest. As much time as possible, of course, will be devoted to photography, but we shall not attempt to limit ourselves to this entirely."

The Lantern Slide Interchange

At the meeting of the California Camera Club, held on April 4th, sets of slides were shown contributed by the Washington Camera Club of Tacoma (Wash.), the Orange (N. Y.) and Syracuse (N. Y.) Camera Clubs.

The slides were good, especially those of the Orange Camera Club, but we were not prepared for such "freaky stunts" in the matting line as displayed by that club. Some of the pictures were no bigger than a postage stamp, and were matted "any old way" on the plate. First a little picture would appear on the northwest corner of the screen, then one on the southeasterly corner, then one criss-cross. It afforded everyone much amusement, which was probably the "intention" of the Orange boys.



ANNUAL MEETING OF THE AMERICAN FEDERATION OF PHOTOGRAPHIC SOCIETIES

BY WM. H. WALLACE
Metropolitan Camera Club

Straight across, left to right: J. P. Hodgins, Toronto; William H. Zerbe, Jr., Brooklyn; O. C. Reiter, Pittsburg; Adolph Petzold, Salon Club; Curtis Bell, New York; R. L. Sleeth, Jr., Pittsburg; E. Goldensky, Philadelphia; Walter Zimmerman, Philadelphia; S. C. Bullenkamp, New York; F. C. Beach, Toronto; John H. Thurston, Boston; Dr. W. J. Furness, New York; Charles E. Fairman, Washington.

American Federation of Photographic Societies

At the annual meeting, held March 22, 1905, at the Metropolitan Camera Club of New York, the following clubs were represented: Pictorial Club of Philadelphia, Capital Camera Club of Washington, District of Columbia, Boston Camera Club, Columbia Photographic Society of Philadelphia, Photographic Section of Pittsburg Academy of Science and Art, Wyoming Valley Camera Club of Wilkesbarre, Pennsylvania, Salon Club of America, Toronto Camera Club, Brooklyn Camera Club, and Metropolitan Camera Club; nineteen delegates being present.

The Franklin Institute of Pennsylvania was appointed temporary custodian of the Historical Records, pending arrangements with the Congressional Library at Washington, District of Columbia, which matter was referred to Mr. Fairman.

Mr. Moss reported completion of the organization of the Federation Lantern Slide interchange and urged every club to prepare and enter not less than one hundred slides each, and that members compete for the one-hundred-dollar prize.

It was resolved that any photographic society which applies for membership not

later than June 1, 1905, shall not begin to pay dues until October 1, 1905.

Resignation of the Secretary was regretfully accepted, and William T. Knox of Brooklyn was elected to fill the office for the unexpired term.

The third Wednesday in March of each year was decided upon for holding the annual meeting.

It was decided to accept the generous offer of the Metropolitan Camera Club to receive entries for the Second American Salon and provide facilities for handling and judging same.

Permanent foreign representatives of the Federation were appointed as follows: Great Britain, H. Snowden Ward; France, A. H. Stoiber; Austria, Mathies Masurin; Belgium, Victor Stouffs; Italy, Alfredo Ornano; Denmark, Copenhagen Photo. Klub; Germany, Otto Scharf; Australia, A. Hill-Griffiths; India, Photographic Society of India.

For the Second American Salon it was decided to appoint local advisory juries in each section of the United States (the representatives abroad arranging for similar preliminary juries). All entries to be sent to our representative in each district. A certain percentage of work to be forwarded to the Metropolitan Camera Club by said representative and the balance returned to senders

who thereafter have the privilege of sending direct to the New York headquarters if they so elect. A national preliminary jury composed of the foremost American pictorial photographers will then select all entries that are up to the salon standard and submit them to the jury of painters for the final selection.

The closing date for entries at New York will be November 1, 1905, and no entries will be received thereafter.

It was resolved that no photograph which was entered for the First American Salon will be eligible at the second or succeeding salons as it is desired that the American Salon shall be composed of work not heretofore shown, and represent the accomplishment of the current year.

SYLVESTER C. BULLENKAMP,
Secretary.

Chicago Camera Club

Walter Marshall Clute, of the Art Institute, Chicago, on "Ladies' Night," Thursday evening, February 16th, at 8.15, gave a special talk on "Famous World Pictures," illustrated with the stereopticon. He took up a number of acknowledged masterpieces of the world and told what made them great, and other things about them and those who produced them.

Postal Photographic Club

At the Annual election of the officers of the Postal Photographic Club of Washington, D. C., the following officers were re-elected to serve during the year 1905: President, Charles E. Fairman, 1006 F Street, N. W., Washington, D. C.; Secretary and Treasurer, Gustavus A. Brandt, 631 Maryland Avenue, S. W., Washington, D. C. This Club, which we believe is the oldest of its kind in this country, is in a flourishing condition. There are a few vacancies for active and zealous members East of the Ohio River.

The Washington, D. C. Salon

The salon of the Capital Camera Club of Washington, D. C. held a salon, opened on the 22d of April, in the hemicycle of the Corcoran Art Gallery. The entries closed on April 5th, and several members of the California Camera Club who sent prints must have barely saved their distance, if they got in at all. Washington salons have been preëminently good in the past, and the names of such artists as Richard N. Brooke and Edmund C. Messer on the Jury of Selection warrant the same high standard of excellence in this last exhibit. We may be able to review it briefly in our next issue.

That Hartmann Letter in Our Last Issue

While not anxious to continue the discussion of a matter to which the pages of CAMERA CRAFT have been closed, we desire to make a few comments that were purposely held over so as not to influence those who might wish to impute to us motives prompting the publication of the reproduction on page 247 of our last issue. CAMERA CRAFT made no display of an anxiety to secure one of these letters for publication. CAMERA CRAFT did not seek to curry favor with either side in the controversy by advertising its willingness to publish or to withhold. We have all heard much concerning the existence of these letters and the publication of a reproduction was certainly in the nature of information given to a large number of our readers. It was published with the full consent of those interested, and furthermore, its publication was influenced neither by fear of standing convicted or hope of acquittal. It was reproduced simply as a matter of information, shorn of all value as capital in a discussion that we hope and trust has lost what little seriousness it may heretofore have claimed.

The Columbian Photographic Society

This wide-awake and progressive Philadelphian society issues a neat little monthly of twenty pages, many of the pages being devoted to most instructive photographic matter. Their Annual Print Contest resulted in the following prizes being awarded: First prize, gold medal, to James S. Powell; second prize, silver medal, to Frank P. Homer; third prize, bronze medal, to Thomas J. Lloyd. Honorable mention to John W. Dawson, J. A. Tobias, and Fred Chaston.

The Editor of the official organ, *The Columbia Camera*, commenting on the judging says: Only those who have attempted to judge a miscellaneous collection of good photographs can appreciate the task and we are glad that the gentlemen selected acquitted themselves so well. In this connection we would suggest the advisability of classifying the exhibits in future contests, as it is manifestly impossible to do justice to prints varying from exquisite pictorial effects to extraordinary fine mechanical work, when bunched together in one and the same class. This matter should be given the careful attention of the Exhibition Committee.

Chicago Camera Club Celebration

The Chicago Camera Club held its first club dinner in the Pullman Building last night. J. L. Rosenberger acted as toastmaster. Walter Marshall Clute, F. Dundas Todd, Dr. C. W. Hawley, C. S. Babcock, F. S. Crowell and others made addresses. George T. Power was presented with a specially designed watch charm, in token of appreciation of his services in promoting the First American Photographic Salon, the pictures of which were recently exhibited at the Art Institute.—*Chicago Evening Post* (March 31st).

Mr. Rosenberger writes: "I may add that the dinner was one of the most successful things to the credit of the Club, so that already it has been suggested that several dinners ought to be given another year.

"As stated in the *Post* report, the President acted as toastmaster. Walter Marshall Clute's talk was mainly a satire of the finest kind upon tasteless mounting with submounts of many colors, bad trimming and framing, and the so-called 'salon picture' which may be turned one side up or the other, and called a landscape or portrait, and so forth, though he did not close without words of high appreciation as an

artist for much that is being done. F. Dundas Todd, always forceful and interesting, was at his best in setting forth some of the values of a hobby, and of photography as one in particular. He reached the climax of the evening when he presented, in behalf of the Club, to George T. Power, Vice-president, a beautiful, heavy, specially designed and engraved, gold medal, with fob-chain, in token of appreciation of his services in connection with the First American Photographic Salon.

"Dr. C. W. Hawley followed with a happy account of what amateur photography had done for him in opening the door of the art world to him, and so forth, while C. S. Babcock wittily claimed some advantages for the pursuit of more chemical knowledge. F. S. Crowell told of the changes from 'wet-plate' days."

Chicago Camera Club Announcements

The following announcements have been made by the Chicago Camera Club:

April 6th, Talk on Papers and Demonstrations for Carbon Effects, by C. L. Bouton.

April 13th, Exhibition of Interchange Lantern Slides and Testing of Slides for Members.

April 15th, Home Portraiture; by Ben Eichelman or J. Pringle. (2 P. M.)

April 20th, Ninth Art Talk, Subject: "Famous World Pictures;" illustrated, by Walter Marshall Clute, of the Art Institute. (Members may bring ladies.)

April 27th, Through Yellowstone Park with new colored slides. (Ladies invited.)

May 1st, Special Portrait Exhibit. (Let us try to make it the best of the year.)

May 11th, Exhibition of Interchange Lantern Slides and Testing of Slides for Members.


May 18th, Tenth Art Talk, Subject: "Portraiture;" by Walter Marshall Clute.

May 20th, First Saturday Afternoon Outing (leaving Club Rooms at 1:30 P. M. for Salt Creek), with W. H. Edwards for guide.


May 25th, Special Set of Slides. (Ladies invited.)

May 30th, Members and friends wishing to go out together on this date will meet at the new terminal station on Fifth Avenue, north of Van Buren, at 8:30 A. M., and take the electric line for Glenwood Park and the Fox River, getting lunch at Batavia. Fare for round trip (to Batavia) \$1.

June 1st, Annual Meeting and Election of Officers.



Notes and Comment



Royal Re-Developer

FOR OBTAINING SEPIA TONES ON BROMIDE PAPER

Unquestionably there is a growing demand for large Sepia-toned prints, a demand which the photographer has been somewhat disinclined to foster owing to the fact that heretofore it has entailed the employment of the somewhat tedious, though simple, method of hypo toning. With Royal Re-Developer the process is simple, short and inexpensive.

The results with Royal Re-Developer being chemically identical with those obtained by the hypo-alum method, there can be no question of permanency and there is no change from the original black and white in either detail or gradation. Re-Developed Royal Bromide prints are particularly pleasing, but a Bromide print of any texture or surface which has been evenly fixed and thoroughly washed will give a desirable result when redeveloped.

The expense of the process is slight, as three hundred 8 x 10 prints can be redeveloped by the contents of a seventy-five cent package and the time involved is not long, as a print can be turned sepia in less than two minutes.

There will, we believe, be a large demand for Royal Re-Developer, especially from the professional trade. It's worth exploiting.

California College of Photography News

The organization of the student body was perfected at a meeting held in the assembly room at 4 P. M., Tuesday, March 28th. The following officers were elected: President, H. L. Mansfield; Vice-president, Miss Annie M. Sullivan; Secretary, J. M. Garrison; Treasurer, Miss Elizabeth Westall. The subject of College colors was taken up, and after some discussion, dark green and burnt orange were chosen. Miss Maude E. Baldwin suggested that a College pin should be secured, and President Mansfield appointed Miss Baldwin together with J. M. Garrison as a committee to procure such a pin of

solid gold having the letters C. C. P. engraved on it. It was also decided to have stationery engraved with the college monogram, for the use of the students.

The 1905 *Class Annual* is now in the hands of the printer. This handsome book will contain reproductions of the work of various students, photographs of the class officers and students; also a brief write-up regarding the class of 1905. There will be a few extra numbers printed and persons interested in the College can obtain a copy by addressing the College Business Office.

A European Tour

A most interesting tour of Europe with a party of photographers during the coming summer is planned by Frank Roy Fraprie, 170 Summer Street, Boston, Massachusetts. With a party limited to twenty, he proposes to travel through Belgium, the Rhine country, Switzerland, Italy and Sicily, visiting the most picturesque regions of the continent, and giving practical instruction in artistic photography, as well as filling the more usual functions of a conductor. His qualifications as a pictorial and technical expert are vouched for by the fact that he is a member of the Salon Club of America and an associate editor of the *Photo Era*. Information as to cost and details of the trip will be gladly furnished on application to the above address.

Sailing from New York, June 17th, the places visited will be Antwerp, Ghent, Bruges, Brussels, Louvain, Cologne, The Rhine, Heidelberg, Lucerne, Interlaken, The Bernes, Oberland, Berne, Lake Geneva, Territet, the Simplon Pass, Lakes Maggiore, Lugano and Como. Milan, Venice, Chioggia, Ravenna, Bologna, Florence, Fiesole, Pisa, Perugia, Assisi, Orvieto, Rome, Tivoli, Albano, Nemi, Naples, Capri, Amalfi, Salerno, Pompeii, Palermo, Selinunto, Girgenti, Syracuse, Taormina, Gibraltar, and the Azores.

While the tour is primarily for camera devotees, several non-users are already

enrolled, and the trip will be a most enjoyable one for any person who desires to see Europe with the minimum of care, and the maximum of enjoyment. Mr. Fraprie is an experienced traveler and linguist, and is well acquainted with the region traversed.

The Judges in the \$2,000 Kodak Competition

We have been asked to announce that Messrs. Charles I. Berg, A. Radcliffe Dugmore and Henry Troth have consented to act as judges in the \$2,000 Kodak Competition. These gentlemen are well known by their own accomplishments in the photographic field; they are broad-minded men and with their undisputed knowledge of both art and photography there is no question concerning their ability to recognize merit in a picture, no matter to what school it may belong. We must not only congratulate the Eastman people in securing such unimpeachable authority as this combination will present but the intended competitors in this contest should be congratulated as well, that their pictures will go before such an impartial and capable jury. There can be no doubt as to the satisfactory outcome of their work and all should feel that to win in this contest is indeed an achievement of which they may be proud.

C. P. Goerz Announcement

MY DEAR SIR: We take pleasure in informing you that, owing to the steady and considerable increase of our western business and in order to better accommodate our western trade, we have decided to open a branch office in Chicago. We propose to carry there a complete stock of all our Anastigmat Lenses, Cameras, Shutters, Trieder Binoculars and other specialties, and we will be in a position to fill and ship orders promptly from our new office. We will thus be able to save from forty-eight hours to three days' time in the delivery of our goods.

We take the opportunity afforded by this announcement to thank all our friends for the kind support they have so generously given to the Goerz productions in the past. We shall endeavor to sustain in the future, to the best of our ability, the enviable reputation which the high standard of our goods and the straightforward policy of our firm

have enabled us to build up during the past ten years.

Our Mr. Benson has been appointed manager of our Chicago branch, while Mr. A. K. Boursault will take charge of our Eastern department. The general management of the firm remains, as before, in the hands of our Mr. L. J. R. Holst.

Respectfully,

C. P. GOERZ.

The New Premo Catalogue

The 1905 Premo Catalogue is of unusual interest and should be in the hands of every camera user in the country. It describes and explains the improvements in the Premo Film Pack which permit of different exposures being removed before the entire pack has been exposed. This is made very simple, and seems to remove the only slight disadvantage that could be laid at the door of this most excellent utility. Leaving this most interesting section of the catalogue, we find several new members of the Premo family have been added to the list. The No. 3 Premo Folding Film Camera is no doubt destined to become one of the most popular instruments on the market. The "Premo Reflecting" is the latest achievement in this line, the four pages devoted to it being perhaps the most interesting reading in the book. On page 31 is a description of the new view camera, which, for completeness and adaptability combined with a reasonable price, leaves nothing to be desired. Do not fail to secure a copy of this new catalogue from your dealer or send direct to the Rochester Optical Company, Rochester, N. Y.

Ray Filter Competition

As we announce in this issue, Burke & James, of Chicago and New York, have inaugurated another Ray Filter Competition. Cash prizes amounting to \$100 will be given away. All camera users can enter this competition, and all pictures, either landscape or flowers, will be admitted, provided that the pictures were made through one of the Burke & James Ray Filters—either the "Ideal" or "Isochrom."

For full particulars drop Messrs. Burke & James, Chicago, a postal card and circulars acquainting you with the few details of this competition will be mailed you.

Conference of Photographic Dealers at the Bausch & Lomb Optical Co's Plant

An event unique in the photographic world took place in Rochester, New York, February 20-22d inclusive, when on the invitation of the Bausch & Lomb Optical Company seventy-five photographic dealers, guests of the company, gathered together from all parts of the country for the purpose of considering matters of mutual interest and advantage.

Conferences of this kind are not unknown, perhaps, in other lines of business, but this was, so far as we know, the first for the photographic trade, and the credit for its inception and carrying to a successful conclusion belongs to the Bausch & Lomb Optical Company.

factory and learning something about the processes of manufacture of lenses and shutters.

The formal sessions of the conference began on Tuesday morning. Mr. Lawrence, the expert demonstrator for the Bausch & Lomb Optical Company, gave the first of a series of addresses on the "Nature and Use of Photographic Lenses," illustrated with lantern views. The entire morning and part of the afternoon session were devoted to a consideration of "The Properties of Light and of the Optical Glass Used in Lens Construction."

Questions and discussion at the close of



One of the rooms in the large three-story addition now nearing completion was fitted up as a convention hall, a platform, palms, and the prize competition pictures on the walls giving it quite a festive appearance. There, at 10:30 A. M., February 20th, the visiting dealers were welcomed by Mr. Edward Bausch who, in closing, extended to them an invitation from George Eastman of the Eastman Kodak Company to remain a day longer as his guests. They were then presented to J. J. Bausch, the senior member of the firm, and an informal reception followed which gave opportunity to exchange greetings and become acquainted.

The afternoon was spent in visiting the

each address resulted in elucidating points and clearing away difficulties besides affording opportunity for a helpful exchange of opinions and experiences.

One hundred sat down to a banquet in the Powers Hotel Tuesday evening—the visiting dealers, members of the Bausch & Lomb Optical Company, their salesmen and heads of departments, and representatives of local companies.

It was the intention of Bausch & Lomb to have this a purely informal affair so that each and every one of the guests might be free from all thought of speeches and enjoy himself to the utmost, but speeches, it appeared, was what they wanted.

It was a late hour which marked the termination of speeches and stories and songs and confidences begot of the time and occasion, and it was a right jolly crowd that finally dispersed.

But it was not a tired crowd that gathered again Wednesday morning, for enthusiasm and interest were keenly alive.

W. V. Moore spoke first, "From the Purely Commercial Standpoint," pointing out the qualities essential for successful salesmanship.

Mr. Lawrence then took the floor explaining: Why an Anastigmat costs three to five times as much as an ordinary lens. What the photographer gets in return for his extra outlay.

In the discussion that followed Mr. Earle of Philadelphia asked whether it might not be possible for manufacturers to co-operate and find ways and means of adjusting flanges whereby they will be more convenient than they now are.

Edward Bausch answered by stating that the present standards had been formulated by the Photographic Society of Great Britain and were generally adopted by manufacturers in 1890, but while they designated dimensions they did not supply suitable gauges, the result being the present unsatisfactory conditions of which all manufacturers and dealers as well as their patrons complain.

Mr. Pancoast called attention to a movement that was instituted in Philadelphia about ten years ago to standardize the sizes and sensitiveness of plates, and efforts to adopt a standard for flanges, which were unsuccessful. One difficulty with flanges was the fact that the Whitworth form or thread with rounded corners was the standard in England whereas the American standard was that of the Franklin Institute with full thread, and a flange made according to English standard would not receive the American standard screw made under the same dimensions.

The afternoon session was opened by L. B. Elliott who gave a very interesting account of "How Advertising Helps the Dealer."

William L. Patterson next discussed "Projection Apparatus and Bromide Enlargements."

The remainder of the session was devoted by Mr. Lawrence to a consideration of the "Qualities of Different Lenses for Certain Work," "The Value of Longer Focus Lenses for Pictorial Photography." "The Influence

of Focal Length on Prospective and the Importance of Considering Focal Length in the Choice of a Lens."

Mr. Bausch now read to the dealers an invitation from Taylor Brothers Company, thermometer works to visit their factory on Friday, February 24th, and called attention to a program for the following day which had been prepared and sent by Mr. Eastman, whose invitation for Thursday they had accepted, and added: "In closing I wish to say that the fear we had at the outset is intensified. As the time has gone on we have more fully appreciated that the task we set for ourselves was a large one, and I am afraid we have fallen short—that there were many things we could have done to make your stay more interesting. We wish to express our hearty thanks and appreciation for the sacrifices you have made in accepting our invitation. There are many dealers, as I stated at our first session, who have been unable to come, but who have been in hearty accord with this movement. What will develop from this initial meeting I cannot now say, but it would certainly be gratifying and beneficial if we could again bring about such a notable gathering as this."

Scarcely had Mr. Bausch finished when Mr. Earle arose and said in part:

"I want to say a word to you personally, please, Mr. Bausch. I have been given the power of attorney here to speak for my friends—The Dealers, and I want to say, first, that my heart is so full of the good expressions, that have been handed to me to be transmitted to you, that I could talk for hours almost and I could not express all the good and kindly thoughts that have been spoken but they are all wrapped up in the very friendly greeting that we want to leave with you in the form of this Loving Cup as an expression of those heartfelt thanks and kindly interests that we feel in you as your associates, and this we give with the heartiest of good will.

"I want to say that Mr. Bausch—and I am sure I voice the feeling of all of you dealers and associates when I say that he stands for all integrity, honesty and honor that is in the photographic world. I have known Mr. Bausch for over twenty years. It was said here that he put aside the college cap and gown and donned the jumper and stood at the bench. It was there that I first saw him in his work.

"The men that have represented him here in these three days have been his spokesmen, have been under his guidance, as we can all see. He has been called "The Prince of Rochester," but I give him another new name, he is "The Prince of the American Photographic Public."

"His interest in us as has been shown by his warm hospitality and his enjoyment has been shining in his face clearly. His pleasure, if I judge the man rightly has been equally as great as ours—it could not be as great as ours because we have more



hearts than he has but he has brought us together and warmed our hearts with his kindness. He is a conqueror in photography as he has been in microscopy. In the latter science he has conquered most of the problems. This wonderful establishment is due much to him and to his selection of men who have helped to place it in the enviable position it holds.

"Let us join hands in a circle and drink his health in this cup as one of the best of good fellows. This cup bears this inscription: 'In appreciation of the events of February 20, 21, 22, 1905.'

"There is a motto on it. It says: '*Ecce, quam bonum, quamque jugundum, Habitare fratres in unum,*' which being interpreted reads as in the 133 Psalm: 'Lo, how good and blessed it is for brethren to dwell together in unity.'

"On the third panel the inscription reads: 'For Edward Bausch, from His Friends, the Dealers.'

"I made you a promise last night at the dinner which I propose to fulfil and if you gentlemen will rise and fall back to the edges of the room and form a circle I will sing the motto inscribed upon the cup."

A circle was formed entirely around the large room, Mr. Bausch and Mr. Earle inside, and after Mr. Earle in a magnificent baritone voice had intoned the Latin motto, the cup was filled and refilled as it passed from Mr. Earle to Mr. Bausch and then around the circle.

Mr. Bausch, in accepting the cup, said: "I feel that you have made a mistake in selecting me as the recipient of your kindness. I accept this cup in a broader sense—that I am to receive and be custodian for my father, his old partner, my brothers, and brothers-in-law, and help in general. I cannot express to you the thanks I feel so deeply, and it is impossible for me to say what I would like. I feel it, and I hope that you think I do, and am sure you do. This will always be to me and the other members of our family, I am sure, a memento of kindness, on your part and a bright incident in the history of our business. We will always hold it in high esteem. We will always hold you all in high esteem. We shall never forget this event. We never can."

Mr. Earle then called on Mr. Sargent of Cleveland, whom he referred to as one of the "Old Guard," who responded in a most interesting and happy strain, voicing the thanks and appreciation of the visitors.

All now joined in singing "Auld Lang Syne," and amidst hearty expressions of mutual good will the First Conference of Photographic Dealers came to a close.

CAMERA CRAFT



San Francisco, California

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CAMERA CRAFT PUBLISHING COMPANY

114 GEARY STREET

SAN FRANCISCO, CALIFORNIA



BEYOND
A pinhole effect
by DR. H. D'ARCY POWER



VOL. X

SAN FRANCISCO, CALIFORNIA, JUNE, 1905

No. 6

Double-Printing Negatives

By C. H. CLAUDY

Illustrated by the author

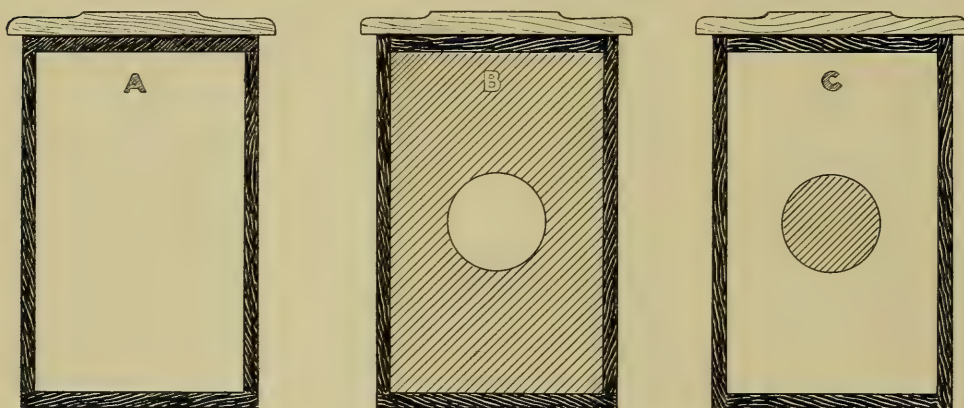
There is nothing which will better aid a full understanding of apparatus, the best way to use it, and the things which it can be made to do, than ceaseless experimenting. You cannot try too many different things, do too many different photographic "stunts" or make too many experiments for the good of your knowledge. The more you work, the more you know, and the more successful you are with one operation, the more success you will have with the next one you attempt. Many experiments have their entire end and aim in what they teach, and, once performed, pass on their way into the infinity of forgotten things. If, however, your experiments can serve a useful end or be productive of something pleasing to the eye, so much the better. Such a series of experiments is this which I am about to attempt to describe.

In the first place, I want to explain my title. Editors insist on having titles for the stories they print, and he who writes is supposed to be as graceful and witty, as choice and as clever as possible in the title which he selects. Now I know well enough that my title here is none of these things, but I had to call this something, and what you see is as near as I could get to the facts in a few words. For these experiments have for their aim the production of a negative which will make two or more prints at once, combined, and (this is the point), the making of such a negative in the camera. Inasmuch as two distinct prints come from the same negative at the same time, such a negative is "double printing," but, considered in the light of the common meaning of these words—the combining of portions of two negatives in one harmonious print—it is misnamed.

The prints produced by the means I am about to describe have the merit of oddity, can be useful, and I know of no reason why they should not be both beautiful and artistic, except the limitations of the one who makes them. For menu cards, programs, souvenir cards and all decorative purposes where photography is employed they surely have a place ready made for them. I will refer you to the first half-tone illustration, which is that of a young girl, bordered with a bunch of flowers. If you were asked how this picture was produced, you would probably suggest that the

photograph of the girl was pasted onto the photograph of the flowers and the whole used as copy for the engraver; or else you would say that a print had been made from a flower negative, with a circle blocked out, and the picture of the girl printed in afterward. But you would be wrong in both cases. Copying two photographs super-imposed would undoubtedly give the result, but not as clearly or as prettily as making the photographs direct. Double printing from two negatives would undoubtedly give an identical result, but think of the labor if more than one or two such prints were wanted. No! The method was quite different.

Taking an old plate-holder (I am supposing that you are going to attempt this process also), draw a line three eighths of an inch from the edge of the slide all around it. With a sharp knife, cut through the slide on this line. If the slide be of rubber, you will have to be very careful not to break the frame after it is made, as the rubber is brittle, and for that reason it is advised that a composition slide be used. Having removed the center piece, carefully sandpaper the cut edges until they are



smooth and have no lint hanging to them, when you will have a frame something like that shown in the first diagram. It is necessary to have at least two of these frames, and three will be found more convenient. In making a negative such as that from which the girl and the flowers was printed, you will require some thin, opaque paper and some equally thin, transparent medium—either oiled tissue, architect's tracing-cloth, or, best of all, clean film. Stretch tightly a piece of the opaque material over one of the frames, securing it in position at the edges with a very thin coat of strong glue. Use carpenter's glue and thin it out with vinegar and by heating it in a water-bath. It is very necessary that a tight joint be made all the way around, hence the necessity of a strong glue. And unless the coat of glue be thin, the skeleton slide, with the paper, will not pass through the opening in the plate-holder. Cover another frame in the same way with the transparent medium and wait as patiently as possible until both are dry before proceeding further. The next step is the cutting of a circle in the center of the opaque-covered slide, and the attaching of an opaque center to the middle of the transparent, covered slide. The size of the circles can be anything the plate will admit, but it is wise to leave considerable margin, otherwise the effect of the two prints is lost in the result. The circles I used were approximately one third the smaller

dimension of the plate. The cutting of the circle from the opaque paper can be most easily done with a carpenter's compass, one end of which has been sharpened; but a sharp knife, in steady hands, will do nearly as well.

Now there are several ways of adjusting these circles. If the circular hole and the circular opaque spot on the film are of the same size and are adjusted center to center by carefully placing one frame on top of the other, it seems obvious that when they are used, the joint will be exact. Nevertheless, a true, close joint is almost an impossibility by this means, because the slide to a plate-holder does not come into actual contact with the plate, and there is a consequent diffusion of light

between the edges of the opening in the frame-slide and the sensitive surface. The lack of a close joint can be made up in two ways, to wit, either by retouching on the negative and blocking out the joint to a white, or by inserting still a third slide, which has an open hole in an opaque covering and an opaque spot nearly filling this hole. If such a slide is inserted in a plate-holder and the plate exposed for an instant to the sky, the result will be a black circular ring on development which will print a white circular ring in the finished result. The print under discussion was finished in this style and then gone over afterward with a bow-pen and drawing-ink, which makes two still whiter lines in the print. I do not know whether these will show in the half-tone or not. I have had to describe the apparatus first and have spoken several times as if you knew how to use it, because I couldn't very well proceed otherwise. If you have missed the very simple principle, however, in too close attention to the way the apparatus is made, you can find it in the following paragraph.

Using such apparatus as I have described, the picture of the girl and the flowers was made as follows: The camera was set up and focused on the young lady, who was sitting down, and who obligingly consented to hold her head still for a few minutes. The plate-holder was inserted and the ordinary slide withdrawn. This was replaced with the slide of opaque paper, having the circular hole in its center. An ordinary exposure was now made, exactly as for an ordinary portrait. This slide was then withdrawn and the ordinary slide replaced. The camera was next focused on a water-color picture of some flowers, which were made to fill the plate. The ordinary slide was again withdrawn and the other slide, covered with film and with an opaque spot in the center was put in its place. An ordinary exposure was then made on the painting. Finally, in place of the ordinary slide, a compound slide was put in, consisting of a frame, covered with opaque paper, with a circular hole cut in the center, across which was pasted a piece of transparent film, on which, in turn, was fastened a circle of opaque paper smaller than the hole. A third exposure





was made with this slide, pointing the camera at the sky in order to get the opaque black deposit on the negative which would print a white border around the girl's head in the resulting print. As previously stated, this was touched up with a bow-pen on the negative, resulting in an inner band of a gray enclosed between two white lines.

Of course, it is not at all essential that the holes and blocking-out pieces be round; in the second half-tone I have made a double print after this method, in which the picture and its surrounding border are square. The method was identical with that just described, except that I did not use the third frame to make the white border, but covered the joint in the negative with retouching opaque. Here a winter automobile party is inserted into a frame of a winter woodland road. It would be suitable for an automobile illustration or catalogue or as a souvenir of a trip, and its oddity would probably recommend it to your consideration, if you did not think it otherwise attractive. There is no reason, either, why the double-printing negative should always be made with the two separate pictures centered to each other. The masks in the frames can be adjusted so that the inserted pictures will come on any desired edge. The object of the frames being cut out as large as possible, of course, is to allow masks to be changed at will. If you cut a circular hole in a slide for every circular picture you made you would find it rather an expensive business, but by having two or three frames, and making different masks of paper and film, and gluing them into position, this difficulty is overcome.

The infinite variety of effects obtainable with this method of combining two negatives in one must be obvious. Different kinds of transparent material will give widely varying effects. Bolting-cloth can be used and will give a similar effect to the bolting-cloth enlargement. The third frame, with its masks arranged to print a white border only, can have that open space covered with a coarse mesh cloth and produce an effect similar to that which would result were a print pasted on cloth and the cloth on another print and the whole photographed. It is not necessary, either, to go to life and nature for all the models. Both the views in the second picture were made from nature, but, as already stated, the first picture was made from nature and from a painting, I not having any flowers on hand at that time.

I am quite sure that some of those very artistic photographers who read this—those who devote themselves entirely to the most ultra variety of fuzzigraphs—will question the art value of any such tricking the camera as I have described. But, as I stated in the beginning, quite apart from the use or the lack of it of this and kindred processes, any such experimenting, carefully and conscientiously done, cannot help but widen the experimenter's acquaintance with his tools and thus assist him to be a better photographer and a better artist. If you perform these experiments and get exact results, you will have had to exercise both pains and care in getting the images centered and properly adjusted to each other, and no such practice is ever wasted.



A WINTER VISTA

BY W. W. NASH



LISTENING
by ADELAIDE HANSCOM

Shadows

By HARRY QUILTER

Shadows play a very important part in a picture, and in photographic pictures they are sometimes all-important. The shadows that fall among the objects which comprise a landscape, greatly affect the forms of those objects. Their effect is purely and simply to explain and define them, giving what we may term relief or projection, and so give rise to, or cause the appearance of solidity or modeling in the photographic picture. In photography nothing tells with greater effect than this relief, so that when the shadows are most effective, as when a landscape



WHEN LENGTHENING SHADOWS FALL

is photographed during the early morning or during the evening, it always looks so much more interesting.

Every one has noticed that the light is lower in intensity, and the shadows of all kinds are sharper and longer, throwing out every feature into strong relief. They may also form larger or smaller masses of darks and light, and thus tend to create what may be termed simple breadth. Shadows, moreover, as they flit about according to the position of the sun, may have the effect of diversifying by means of these expanses of light and shade an otherwise uninteresting landscape. They may also lend great aid to the composition of a picture, just as their lines and proportions arrange themselves, and so we can utilize them for that purpose. As a means of giving interest to the foreground, they excel.



EVENING SHADOWS

It may seem comparatively easy to photograph the shadows as they appear to the eye, but in reality it is somewhat difficult. When we speak or write of shadows, we have to remember that in landscape absolute shadows are very rare; reflected light breaks into them and softens the dull masses. There is always light and air present. And so we should not photograph them as black masses, but by giving them a full exposure render them in soft and delicate tones, in reality there should be atmospheric effect even in shadows.

As photographers we are always endeavoring to portray effects which affect our artistic and poetical fancies, so we essay to portray morning or evening shadows, and there can be no doubt that these effects are of a psychological interest; and as they vary with the seasons, and the intensity of light, so the same scene is always interesting under these varying conditions. Some interesting pictures can be made if we endeavor to portray the long shadows as they fall toward the camera. As every photographer should be aware, there is some difficulty about this, on account of the rays of sunlight converging into the lens, and so fogging the plate. However, it can be managed by a little maneuvering of the camera, and we must never forget that we are exposing against the light, and there being very little reflected light, a longer exposure than usual will be required.

When photographing subjects in which these shadows are a prominent feature, we require an isochromatic plate, and if possible a rather deep colored ray-filter, if we are to obtain a correct rendering of the scene. Do not, however, stop the lens down too much, as this will spoil the atmospheric effect. When developing

the plate a diluted developing solution is best. Do not develop too far, but rather adopt the factorial system so ably described by Harry L. Shepherd in *CAMERA CRAFT*, March, 1905. A soft, detailful negative is the kind to be aimed at. Nothing so destroys the effect of the mellow lighting characteristic of late afternoon and evening effect as chalky high lights and shadows devoid of detail. Blocking up of the high lights by too contrasty development is objectionable in any case and particularly so with this class of subjects.

Pictures of evening shadows are almost always popular, as they affect the imagination and are thus easily understood. This is the chief mission of art, and shadows appeal to the faculty of imagination by reason of their inherent mystery and pathos. There should not, however, be too much shadow, or the effect we wish to emphasize will be lost. The shadows should act as a point of rest, so to speak. The sunlit portions of our picture are easily seen and understood, and the shadows, by reason of their not being so easily and fully understood, arrest the quick action of the mind, and by dwelling upon these mysterious shadows, create a period of rest.

Light, life and joy are all related to each other and as the light of day diminishes we all feel a sense of loss, of regret, and an undefinable sadness comes over us. Shadows therefore tend to the pathetic, and as they fall upon evening landscapes, they are equally impressive in their character. Shadows rule vast spaces, they hide and hush the busy activity of a sunlit world, and thrill us with a sense of gathering night and rest.



WHEN THE SUN IS LOW



CHILD STUDY
by ADELAIDE HANSCOM

Kits and a Simple Way of Making Them

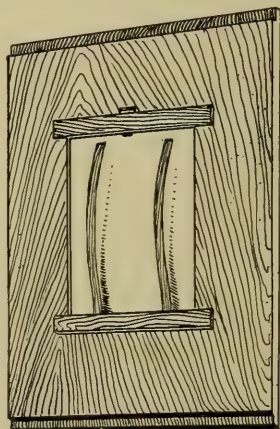
By E. AUERBACH

A supply of kits for working one or more smaller sized plates is necessary to, and should be a part of every 5 x 7 or larger outfit and their usefulness and convenience is not to be overlooked even by the possessor of the modest but popular 4 x 5 camera. Comparatively few amateur photographers however are well equipped in this direction. One reason for this, that particularly applies to outdoor work, is the feeling of the owner of a larger than a 4 x 5 instrument that he should get the most results possible determined by the size of his plates for his expenditure of muscular energy in hunting the elusive landscape. To pack a weighty 6½ x 8½ outfit on a day's outing with say four-quarter six-half plates in his holders hardly appeals to him. He overlooks the fact that with a lens of a given focal length many a landscape subject is better interpreted if confined to the limits of a smaller plate, and in such instances he either wastes much of the larger plate or more probably he finds a nearer viewpoint and mishandles the subject in an effort to use the full-size plate at the expense of a correct perspective. Another good reason for the unpopularity of kits is the unsatisfactory design and make of many of the manufactured articles. Two of them in a light holder often strain it and it is apt to be difficult or impossible to return the slide after an exposure. Insufficient provision is made to hold a short cut plate and when the slide is drawn it often topples into the bellows. Plates are rarely held in the focal plane and accurate focusing results in more or less of a failure. It is a puzzle to load some of them in the light, much less in a dark room, and in some cases the plate must be put in place in the kit before the latter is put in the holder.

The foregoing was my experience with purchased kits, and while I may have been unfortunate, I know it has been that of others. About five years ago I took up photography with a 4 x 5 cartridge kodak; a year later I got a 5 x 7 plate camera; then it was not long before I owned a 6½ x 8½ instrument, and looked for a time with contempt on smaller sizes. But as 6½ x 8½ negatives accumulated, with in too many cases but 4 x 5 or 5 x 7 subjects thereon a reaction was inevitable and I bought kits so that when off for a day I had an assortment of plate sizes to fall back on. But those miserable kits soon drove me back to full-size plates while I worried out a way to supply their place with others without their many faults. I decided to make what I wanted, but to find a proper medium easy to handle was difficult as I wanted something substantial not a makeshift. I finally found it in tar-board which is a kind of pulp-board that comes in various thicknesses and is to be had in sheets twenty-four and one-half by twenty-eight and one-half inches at any wholesale paper house. It is used by bookbinders for the sides of heavy book covers. It is stiffer and more substantial than the heaviest paste-board, lies flat without buckling and is admirably suited for the purpose of making kits, as, once its peculiarities are understood, it is easily worked. I am now provided with a dozen and a half tar-board kits of my own making. Six of them take three-quarter four-quarter plates which I do not think too small in most cases to use with my eleven-inch rectilinear in home portraiture. With this equipment it is impossible to work too close to the subject and the results show a

delicacy of drawing that is not otherwise obtainable. It compels an appreciation of long focus effects in portraiture. In cases where I must have something larger, I use my four-quarter six-halves which shape I prefer to 5 x 7. I also use this size when I take my camera afield, as well as some 5 x 8 and full-size plates and then feel equal for anything that may come my way. These eighteen kits never give trouble with plate-holders and are made right for short or long cut plates. They hold the plates in the true focal plane in a way that is gratifying when doing fine focusing. They were made at odd times during a few evenings and their total cost was about sixty cents. What their use has saved in the cost of plates is quite an item. The only necessary tools in their manufacture was a sharp pocket-knife and some fine sandpaper, and any one with the ability to trim a print square could make them equally well. A plane and a pair of pliers that I had the use of could easily have been dispensed with.

The thickness of tar-board is designated by the number of sheets that come in a full bundle. Eighteen play under the rebate of not fit other makes, and anxious to make his own with him to the store so ness. The cost is about sheet. For my size plate-sheet in six divisions, making no use of about the whole board, which my purpose. After cutting remainder of the board divisions planned; then $6\frac{1}{2} \times 8\frac{1}{2}$ plate on one cut with the point of the edge of the plate. Then raising a layer of this margin with the point of the knife it was easily peeled away to the depth of the cut. Another light cut and again removing a layer of margin in the same way I was able on the third time to cut through with the knife-point, giving me a piece of board the size of my plate with square, hard, clean-cut edges. If the mistake be made of trying to trim the board to size with one deep cut, the lack of clearance for the knife will force up the layers of the board and a soft thick edge to the kit will result and it will not fit under the rebate of the holder. I then blocked out the center of six of these boards using a rather full-size four-quarter six-half plate. This allowed for future contingencies of the same kind. The center for the plate was cut out and peeled away as with the margin, only I did not cut all the way through so as to leave a thin layer of tar-board at the back to take the pressure of the light brass springs with which these kits are fitted.



sheet boards fitted without my holders, but it might my advice to the amateur kits is to take his holder as to get the right thick-fifteen or twenty cents a holder I laid out each seven by nine inches, two inches margin around was soft and useless for away the margin I cut the roughly into the six laying a smooth-edged of these I made a light a sharp knife around

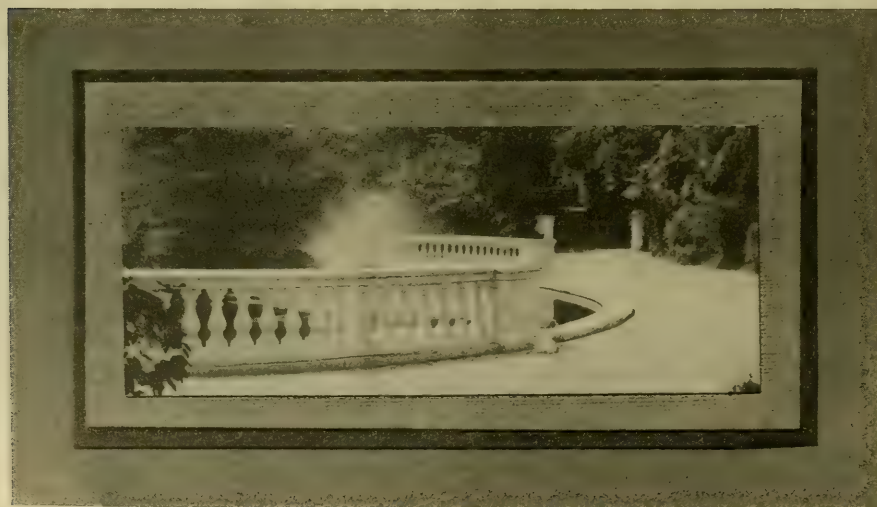
To make the rebates to hold the plates I used some thin cigar-box wood. This I planed to a thinness that when a strip was laid on a kit in place in the holder, moving the slide back and forth did not disturb it. The cigar-box wood can easily be worked with a sharp knife and sandpaper by one who has not the use of a plane. This wood I trimmed with the knife into strips about five inches long by half an



BEFORE THE GRINGO CAME
by HANA ROBISON

inch wide. Placing a short cut plate in the kit I laid one of these strips overlapping the lower edge of the cut-out so it would just hold the plate in place and glued it there with LePages glue. Another strip was glued even with the upper edge of the cut-out, but before this was done the springs and sliding stop were put in place. The springs were cut from the thinnest spring brass I could buy. I used an old pair of scissors for this purpose, and for the four-quarter six-half kits cut the brass in strips about one third of an inch wide and a little longer than the cut-out. About one inch from the end these strips were bent sharply up at a right angle and then after measuring the depth of the cut-out from front to back, the ends of these strips were again bent off at a sharp right angle. These strips were then laid in place a little distance apart, the bent ends overlaying the upper edge of the cut-out so that when the second strip of wood was glued in place it would cover and secure them. The sliding stop had now to be provided for. This was cut from the same brass as the springs and made about a quarter of an inch wide and long enough so that when the ends were bent slightly up it would, when pushed home hold the shortest cut plate securely. A shallow groove for it to slide in was made midway on the under side of the second strip of wood. Adjusting the stop and the springs the second strip of wood was secured in position, and before the glue set the stop was moved back and forth several times to make sure it was not stuck. After the glue has set hard the spring can be given sufficient curl upward so as to hold the plate up to the focal plane. This finished the kits with the exception of a coat of asphaltum varnish that I gave them to make them water-proof, but this was entirely unnecessary.

My kits have been in use now for some time. They have had some careless handling but still give as good service as when first made, which demonstrates that tar-board is durable enough for the purpose. Every photographic friend of mine that has seen them has envied me their possession, and several who have made some for themselves say they would sooner part with many other photographic conveniences than their kits.



THE PARK ROAD

BY W. F. MORGAN
The Focus Club

The Focus Club

The complaint is frequently made to the Editor of CAMERA CRAFT that an insufficient number of members could be secured with which to organize a camera club. The complaint has been made so often of late that he takes some satisfaction in presenting to his readers a brief account of a small, yet most successful club that has been in active operation for over two years. The membership is limited to thirty, organization having been effected with but fourteen. Herewith are given portraits of some of the officers, plans of the rooms, views suggesting the interior arrangement of the rooms and a few examples of the members' work. These latter are a portion of an exhibit hung on the walls by the members during a recent



G. P. GRIFFING, M. D.
President the Focus Club

D. C. HOLTON, M. D.
First President the Focus Club

"Ladies' Night." It might be mentioned that euchre was the principal feature of the evening, followed by an exhibition of billiard playing by two of the ladies present. The diagrams, pictures and data used in this article were supplied the Editor by John J. Tresidder, Vice-president of the Club, in response to a request for information concerning this most enterprising and enthusiastic organization.

The Club was organized January 15, 1903, by several professional and business men residing in a certain section of Brooklyn, fourteen members forming the Club. The rooms previously occupied by the Brooklyn Camera Club were occupied, but a year later more commodious quarters were secured at their present address, 121 Meserole Avenue. As mentioned before, the membership was limited to thirty but at a recent meeting it was found that a number of friends of the members had long wished to join, and the roll being full they could only be accepted by extending the membership limit to forty. The Club now numbers thirty-six.



PAPA IS COMING

BY J. J. TRESIDDER

give us a description of this piece of apparatus.

The object of the Club is to promote photographic interest and sociability among its members. True to its tenets, the interests of the members are about equally divided between the social and the photographic side. The chairman of the Social Committee, George W. Johns, while giving this part of the Club work the advantage of his marked capabilities in that direction, does not neglect his photographic work, ranking high as a camera enthusiast. Every Friday evening there is progressive euchre, suitable prizes being offered. Alternate Fridays the members may bring their friends. A billiard table forms a part of the furnishings and it is needless to say that it does not lack employment. While the membership was limited to thirty, vacancies were

The rooms now occupied are easily accessible to all the members. As will be seen by the diagrams herewith, space is ample and equipment all that can be desired. Generous lockers are in striking contrast to the small pigeon-holes so often designated by that name. The dark room is fitted with all conveniences and the enlarging room contains one of the best equipped enlarging lanterns in the possession of any like society, not excepting the New York Camera Club. Conveniences are such that any size up to the largest sheet of bromide paper can be used. The window is fitted up with a double shutter arrangement which provides perfect ventilation. The shutter is shown in one of the diagrams and as can be seen, fresh air enters through a series of round openings near the bottom while the warmer air passes out through a like set of holes near the top. This shutter is removable, permitting the room to be flooded with daylight when required. The arrangement of the light is so perfect that adjustment can be made while the exposure is taking place. In this connection it might be added that Mr. Tresidder has promised to



PORTRAIT

BY J. E. WEEKS



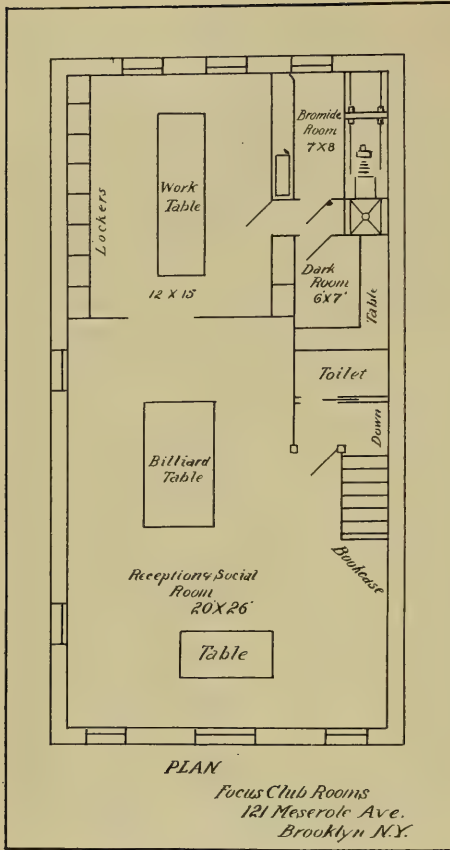
WINTER

BY D. C. HOLTON, M. D.



OLD CONEY

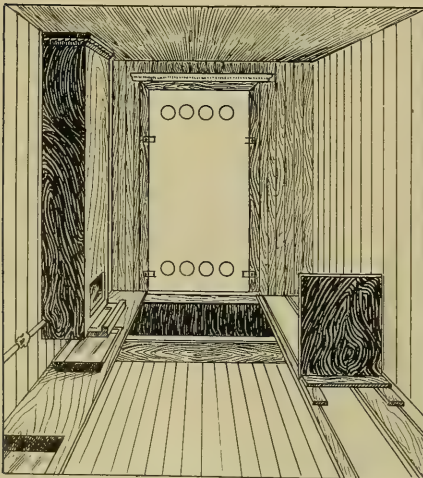
BY A. H. NEWELL



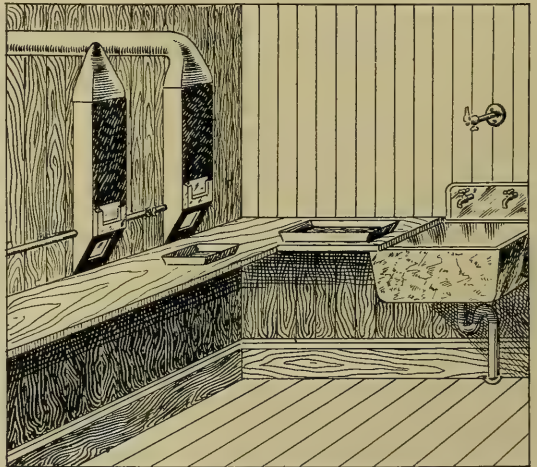
so rare that no effort was required to keep the roll complete. In fact, the increase of the possible membership to forty was made only that friends of the members might avail themselves of the advantages offered by the Club.

The first president to hold office in the Club was D. C. Holton, M.D., a charter member of the Brooklyn Camera Club. The present incumbent, G. P. Griffing, M.D., was the first president of the Brooklyn Club. The other officers are: Vice-president, John J. Tresidder; Secretary, George B. Smith, and Treasurer, W. F. Morgan. In addition to the social features mentioned, lantern-slide and print exhibitions are held, and at the regular meetings instructive and interesting papers are read and talks given by the members. The dues are one dollar a month. It was expected that by limiting the membership, a more harmonious and enjoyable fellowship would be secured than is possible with a larger number of members. Experience in other clubs had impressed this fact upon the men composing the Focus Club and

the experiment tried by forming the Club with membership limited to a small number has proved all that the most sanguine of its organizers could have expected.



SHOWING REMOVABLE, VENTILATING
SHUTTER TO WINDOW



SHOWING DARK ROOM AND ARRANGEMENT
OF RUBY LIGHT



HELLO

BY H. BARNES

Regarding the pictures herewith, they are selected from those hung at the last Print Exhibition which was held on "Ladies' Night" the last week in February. Some fifty prints composed the display, less than half of the members being represented. This is accounted for by the fact that a number of the members are more devoted to lantern-slide work than to the production of prints.



A CORNER OF THE WORK ROOM
showing Messrs. Johns, Newell and
Cohn reading from left
to right



A CORNER OF THE SOCIAL ROOM
showing the billiard table which is
rarely idle

The Camera and Painters

The camera has rendered some service to art, it is true, says *The Critic*. It has warned painters that a fine color sense and poetic insight cannot atone, in a picture, for slovenly draughtsmanship. On the other hand, it has been responsible for much that is superfluous and tiresome in modern art. The painter has been tempted to try to emulate the seeming accuracy of the camera, although this accuracy is merely superficial. The camera exaggerates and distorts in a cold-blooded manner much more offensive than the exaggerations and distortions of which painters are guilty, faults which have the red blood of humanity in them, and which often add to, rather than detract from, the artistic merits and æsthetic value of a picture. The artist who succeeds in suggesting movement in his picture does so by educating his eye—in other words, by the patient observation of nature and incessant experiment with the pencil and brush. The instantaneous photograph, so far from aiding him, sets him on a wrong track. The perspective of the lens is different



BY THE MOSSY BANKS

BY I. COHN
The Focus Club

from that of the human eye; movement, as registered by the lens, is a caricature (as I have said elsewhere), on movement as seen by the eye. The optic nerves cannot correspond with the brain with the rapidity which makes motion appear to be actually arrested, as in the case of an instantaneous photograph. Photography has led painters who allow themselves to be troubled by it into all manner of mistakes and heresies. The excesses of the naturalistic school are to be laid

at its door. It has caused some painters to be so nervously apprehensive of setting forth anything in their pictures which should violate any scientific canon, or depart in any way from actual truth, that they have degenerated into slavish copyists of nature, afraid to rely at all upon artistic intuition or memory. Worse still, it has brought into existence a whole crowd of weak-kneed painters, who, lacking the patience and the skill to mold themselves into human instruments able to register unerringly anything seen in nature which they may wish to paint, have fallen back upon portfolios of photographic specimens, patching them into their pictures as occasion served. . . . The germ of a picture lies in the person painting it. It is a revelation to us of his soul, plus his skill in all the various technicalities which he must employ, if he is to succeed in showing us himself. This, it is true, may result in showing us something which we neither care to see, nor are the richer or happier for seeing; but at the bottom of the picture the fundamental, valuable, and enduring part of it is the human ego. The painter may deceive himself into the belief that it is nature pure and unalloyed he paints. This is an easily demonstrable fallacy.

Enlarging on Paper

By WALTER ZIMMERMAN

In a previous article I described a complete, although simple apparatus for making photographic enlargements with daylight illumination. It consists of a painted reflector (or mirror) hung outside of the window from the frame; a swing-board to hold one's own camera; and an enlarging board for the paper or plate.

The operation is, preferably, carried on in a large dark room with a north window made safe by an opaque window-shade on rollers, and also with a red shade to alternate with for a safe light, when wanted. If the room be sufficiently modern to be supplied with electric lights, one or two of them may have ruby globes, enabling the operator to find the articles which he requires without risking injury to the paper or slow plate.

A safe light for developing bromide papers is, if the light be strong, one which passes through clear red glass, which will give plenty of illumination for working. A much better color, which is perfectly safe for an eight-candle light, is a deep orange-colored glass or piece of celluloid. It is far easier to estimate the strength of the print with orange light than with red. The light should be two or three feet from the paper, over the shelf used for development, and so arranged that it will not shine in the eyes, and, better still, so that it may be turned away from the shelf to other parts of the room. In prolonged development, as with a weak developer for detail and softness, it is better for the surface not to be exposed to any light and thereby avoid a slight tendency to fog the print.

After you decide which sizes of enlargements you will use, the order should be given for packages of a dozen of each size. The principal makers are the Eastman Company of Rochester, New York, and the Rotograph Company of Germany. Both companies furnish a number of grades. The "Royal Bromide" of the Eastman and the "Imperial" of the Rotograph, are coated on heavy, rough, buff-tinted stock. The white papers are in thick and thin rough, heavy and thin smooth and white and pink glossy. There is also a "hard" grade, for obtaining greater contrast. The speed of all of these papers is practically the same, eight to ten times the exposure for a fast plate.

Both companies furnish admirable bromide papers, and although I have used a great deal, I have never found a sheet that was defective in any way. The bromide paper keeps for a long time without deterioration, and at the end of a year, or even more, it does not appear to show any change. It should be mentioned here that the rough papers, the "Royal," "Imperial" and white rough, require a little longer time in the fixing bath, and longer washing than the smooth papers, a thing that is not generally known.

The sizes of bromide papers correspond with plates and printing-frames, 20x24, 18x22, 14x17, 11x14, 10x12, 8x10 inches, and so forth, in all grades. If you wish to make an enlargement of an odd size, a panel, either wide or narrow, it is best to take paper double the size wanted and cut it in two, rather than to waste paper. For instance, a sheet of 18x22 size will cut into two pieces of either 9x22 or 11x18 inches, and so on. The relative quickness of the bromide

is sixty to one as compared with Velox or Rotox, and fifteen to one, as compared with "special" Velox. As a rule bromide paper produces "soft" effects; that is, full detail, but not heavy contrast, except where the negative is especially hard or contrasty.

On the other hand, the slower papers increase the contrast considerably. Therefore, where the negative is very thin or flat, and contrast is desired, it is better to use the Eastman Velox or the Rotograph Rotox, giving minutes in place of the seconds of the proper exposure with bromide paper. For instance, if a thin negative requires five seconds to print on bromide, it would take five minutes on the Velox or Rotox. The slow paper, with a negative of some density in the high lights would show solid whites, without detail, and heavy blacks in the shadows. It is therefore suitable for enlarging from thin, flat, under-developed negatives. The slow papers can be obtained in large sizes, rough or smooth, through your dealer by special order.

With a negative in the holder or kit, the camera in place in the swing-board, and the paper and developer ready, you will be able to make the first enlargement with the new outfit. The camera must be parallel with the negative and easel, or the enlargement will be blurred. It is best to select a thin negative and one having sharp definition, for the first experiment. Hang a piece of white card or paper of the size of the enlargement desired on the enlarging board or easel; get the approximate size of image by moving the board, and focus sharply on the card. You must expect to waste some of the paper in learning to give the correct exposure, so that it would be wise for you to make use of an old experiment to start with, which will sacrifice one sheet and save several.

Let us suppose that you have on the screen a sharply defined, enlarged image projected from the negative, and that the lens in your camera is fairly rapid. With the first experiment it is better to use the lens at full aperture. The right exposure may be twelve seconds in this case. Take the lens cap, with orange-colored glass or celluloid and place it carefully over the lens, not disturbing the focus. There will then be enough orange light to see to place the bromide paper in its position on the board. Use the glass-headed pins to hold the corners of the paper. The pins should slant outwardly so as not to cast shadows, and the paper should lie perfectly flat upon the board. Take off the cap, and count five seconds exposure. Cover three fourths of the paper—the bromide outer envelope will do—and give five seconds more. Move the envelope to the middle line and repeat the exposure. Move it to a three-quarter line and expose for a fourth time, after which replace the cap and remove the paper for development. If you have worked toward the right, the right-hand quarter exposed the first time only, will have had five seconds, the left-hand end ten, the left center fifteen, and the right center twenty seconds exposure.

If you have bought a ready-made developer, to start with, mix the proportions accurately, and give full, normal development. Bromide paper should be dipped in a tank, or a tray of clean water, to insure uniform action by the developer, and to cause the paper to lie flat in the tray. The developer should be poured from a graduate, or any other wide-mouthed vessel in order to cover the paper evenly and quickly, and never from a slow-pouring bottle. The tray should be tilted from the four corners in quick succession, and rocked until the image appears, or



THE STUDENT
by ADELAIDE HANSCOM

better still, until development has been completed. While the paper is in water or when it has been completely covered with the developer, the whole surface should be brushed over with a tuft of cotton, to remove any globules of air which would cause white spots on the print. If you have been used to gaslight paper, remember that bromide paper does not develop so rapidly and gives more time for the manipulations just mentioned. The Rotograph paper is slower in development than the Eastman. The image should not appear in less than ten seconds. The sudden appearance of the image is an indication of over-exposure, or else of too strong a developer. The remedy, which may save the print, is to pour back the developer quickly and plunge the tray into a tank of water, then add bromide of potash, after which proceed with the development. The true exposure of bromide paper is that which permits full chemical action. The best exposure, with plates and paper of all kinds, is that which allows full, normal development.

Development completed, pour the solution into the graduate and dip the tray, with the paper into the tank, for some seconds in order to rinse off the remaining developer. The print should not be exposed to the air during or after development, as it oxidizes the chemicals, causing yellow stains. Pour off the water, and pour on the hypo solution. This should never be saturated for plates or paper; as such solution, having already all that it will hold, will not properly dissolve the undeposited silver salt. In warm weather, it is best to use the fixing-hardening formula, but it is unwise to use it very frequently on account of chemical changes. With a rather strong hypo solution, five minutes fixing is ample. The action of the hypo is, in fact, so rapid with paper (the emulsion being thinner than with plates), that, in a few seconds, the white light may be turned on, if desirable, while the print remains covered by the fixing bath. The experimental print need only be rinsed in order to wash the hypo from the surface and avoid dripping it on the floor. Permanent prints must be washed for a full hour in running water, and an hour and a half if on rough paper.

Examine this four-times-exposed print carefully in plenty of light in order to determine which of the four sections shows the most satisfactory exposure. If the two ends are much too light and too dark, and even the middle sections are somewhat too light and too dark, it is evident that a correct exposure would have been the average, or about twelve seconds, as at first supposed. The wasting of a whole package of paper would not give as clear a demonstration in exposure as this easy illustration. If the light remains the same as when you made the experiment, you should make a new print at once with the indicated exposure.

In washing the rough papers, which float on the top, should be placed face down; and the smooth papers, which sink, should be face up. Where there is floating paper in the tank, the water should not fall, as from a spigot, but should be brought into the tank by means of a rubber tube. Falling water produces bubbles, which lie under the print causing spots, which are not freed from the hypo, and which, consequently, produce stains when the print dries.

If it is desirable that the paper, when dry, shall have the least possible tendency to curl (an objection to all gelatine-coated papers), make a five to ten per cent solution of glycerine, and keep it in a bottle for use. Let the prints soak for five minutes in the glycerine solution, and then hang them up to dry from one corner. If flat-dried, the glycerine collects in spots, which are translucent



CREPUSCULE
by HAWEIS ET COLES,
PARIS, FRANCE
First American Photographic Salon

and sticky. As soon as the prints become perfectly dry, lay them carefully under sheets of glass, or any other smooth, clean substance, after which, if kept in a portfolio, they will have very little tendency to curl. Where the print is wanted to be very flat and smooth, it may be pinned with a number of thumb-tacks on a flat board, which has been covered with a piece of blotting-paper. In drying, the paper shrinks and sometimes tears away from the pins, but the edges may be trimmed. A trimmed print has less tendency to curl. A print or a paper negative, first dried between blotters and then bound to a sheet of glass, with gummed binding, will, if well secured, dry out as tight as a drumhead.

The best method of drying bromide and other prints is to hang a wire across the workroom, higher than the head, so as to be out of the way, stringing on it a couple of dozen spring clips, made for the purpose. Prints suspended in this way will dry quickly and evenly, and allow the water, with, perhaps, a remaining trace of hypo, to drain off. Large prints have to be supported by two or more clips in order to avoid tearing off.

Now let us go back and give detailed suggestions in regard to part of the work. In placing the negative in the negative holder or kit, the film must be toward the operator, in order not to reverse the position of the picture, unless, of course, reversal is intended, as for carbon work. The negative should be placed upside down in order that the operator may see the image in its right position. In using a film, have it neatly trimmed to plate size (films being usually made with a spare margin), and place it between two pieces of clear glass of the right size (cleaned plates, for instance), in the kit or holder. Films which are especially valuable may be carefully mounted on glass by means of lantern-slide binding, and treated as if they were plates.

Focusing is an easy matter when the negative is clear and has sharp, well-defined lines. With a dense negative, or one absolutely lacking in definition, it is necessary to obtain the focus in another way. Arrange the size desired, with a "guess" as to the focus from the "fuzzy" or dense negative, and then substitute one of the same size, having clear definition. Focus accurately with this, and then, changing back to the difficult negative, make the exposure. Another suggestion as to focusing, where it seems to be troublesome, for instance, where the thumb-screw of the lens may be moved back and forth without apparent change, is to take the average, or middle focus. Move the thumb-screw until blurring becomes perceptible; reverse the screw until there is a blur the other way; then screw it halfway between the two points where blurring begins, and an accurate focus will be obtained. This suggestion is also valuable for persons who are unskilled in focusing, or whose eyesight may be somewhat imperfect.

Now as to exposure. You have learned to make one enlargement accurately, by means of the experiment given, but you do not want to waste expensive paper learning the exposure with other negatives. An expert knows the exposure from the appearance of the image on the screen, and rarely makes a mistake, even if the exposure for one negative be a few seconds, and for another several minutes. Even when you become otherwise expert as to the appearance of the image on the board, there remains the yellow-tinted negative, which may project an image bright to the eye, but with comparatively little actinic effect on the coating of the paper. I will give you an "exposure meter" for enlargements from negatives

of every degree of density or yellowness. Take two printing-frames and two negatives, one with a known exposure, and one about which you are in doubt, with two pieces of "printing-out" paper. Place the printing-frames, with negatives and paper in the sunlight and print to a satisfactory image. Time both accurately. If one prints in three minutes, and the other in three hours, the relative exposure of the two is, practically, one to sixty, and so on. You can get the relative time of a number of negatives at one printing, if you have frames. The two papers do not work alike, but this test will give the best method of determining the exposure of troublesome negatives.

Of course, where the light conditions vary, the exposure must be more or less, accordingly, and the standard should be the light at noon on a clear day.

Here is another odd thing, not often thought of. Yellow negatives require a different focus from clear ones. The focal point of a lens is different for each color, and therefore, that of yellow light is different from that of daylight. The experiment can be easily tried by focusing carefully with a clear negative, and then placing a piece of plain yellow glass in front of the lens. It will be seen that a new focus will become necessary under these conditions. Enlarging requires a liberal use of developer on account of the large size of paper, in order that the print may be kept well covered and not be oxidized by the air, and also in order to have fresh solutions. Purchasing these ready-made would be an expensive matter for the operator who has much enlarging to do. Here then is a developer given to me by Mr. Milton Waide, which I have found to be perfect both with paper and plates:

Have ready a four-quart receptacle for mixing. Take a two-quart porcelain-lined saucepan and heat about two quarts of water. Dissolve in it four ounces dry sulphite of sodium, or twice that quantity if crystal. Then dissolve six ounces dry carbonate of soda, or twelve if crystal. Allow the solution to cool and add enough water to make four quarts. Add and dissolve completely one-half ounce of metol. (Metol decomposes immediately in hot water). Add and dissolve one-half ounce hydroquinone: and, finally, one-eighth ounce bromide of potash. Have a number of small, clean bottles ready and fill to the top, corking tightly. This "metol-hydro" developer, so filled and corked, will keep perfectly for months. For use with bromide paper, dilute one-half, and add more bromide of potash, if desirable. For gaslight paper dilute with four parts of water, and for plates dilute with six parts. This finest of all developing solutions, and by far the most economical, has one serious objection to many people. The metol poisons the skin after continued use, although some persons seem to be free from its effects. A remedy for this, unless the condition becomes chronic, when a drop of developer will cause poisoning, is never to touch the developer with the hands and fingers. It may be poured on and off, the tray dipped in water, and so on, with safety, except where the skin becomes extraordinarily susceptible. Even rubber gloves do not appear to protect in such cases, for, if the gloves become reversed, poisoning ensues as a matter of course.

In other developers there is ferrous oxalate which gives jet blacks, but is rather costly and troublesome. The various German developers, as advertised, give the best formulæ for their use with plates and paper. All of them are available for bromide paper, with the exceptions of pyro and pyrocatechin, which,

while excellent with plates, scarcely seem to have any effect upon paper other than to produce stains.

The operator who expects to do much enlarging may purchase his hypo by the keg, two dollars for a hundred pounds. An "easy" way to use hypo is to nearly fill a large wide-necked bottle with it, and then fill with water, and keep on filling, until the hypo has been exhausted. Hypo crystals must not be poured out on either plates or paper, as they "cut" the silver salt, producing white or clear spots.

I am referring to the use of only one tray for each size of negative, as that will answer all purposes. While one print is being fixed another may be exposed, after which the first is laid in the large tank to wash. I am not one of those who are fearful as to contamination by hypo when very ordinary care is exercised. In fact, it is well known that a very little hypo in the developer acts as an accelerator and is not detrimental. Rinse the tray every time after using, and then stand it up on edge to drain. The one really difficult thing to get rid of is mercury, which sticks to trays, tank and everything that it touches, and yields only to a stiff scrubbing-brush.

In doing photographic work of any kind, and particularly with enlarging, it is important to have an accurate standard for all of the processes so far as it is possible. For instance, with the developer, one should employ the same formula with uniform strength, as a standard for all work of this character. Of course, there are modifications of the developer, but by relying upon the standard, one knows exactly what results are to be obtained by means of these modifications. In other words, with paper of uniform sensitiveness and a uniform developer, it will always be known whether a proper exposure has been made. A slow, forced development means, of course, under-exposure, and a quickly appearing, rapidly blackening print indicates over-exposure. It is not desirable to change the strength of the developer, except for special effects, which will be explained.

If a "soft" print is desired from a harsh negative, it should be over-exposed and a weak developer employed, such as dilution with four times the usual proportion of water. Of course, there should be plenty of solution, so that the air will not effect the paper during the prolonged process of development. The result of this should be a print showing detail in both shadows and high lights. If on the other hand, the negative is very thin and weak, or "flat," the print should be under-exposed, and brought out with a strong developer restrained with additional bromide. There is still a better method of obtaining contrast from very weak negatives, and that is, as already mentioned, by the use of a "slow" paper, such as the regular "Velox" or "Rotox," and giving sixty times the exposure. Another way of modifying the contrast in print is with the diaphragm of the lens. A "wide-open" lens produces a comparatively soft print, while a small diaphragm causes contrast.

One of the troublesome things which the operator with bromide has to contend with, is blisters on the enlarged print. Some writers attribute blisters to defective coating on the paper, or greasy spots on it, causing the gelatine to become separated. The principal cause is, however, a sudden change in temperature, such as from the tepid developer to cold water, or from tepid water to cold hypo, causing a shrinkage in either case, and a separation of part of the coating of the

paper. By avoiding this sudden change of temperature, the tendency to blister will be greatly diminished. When they form, it is best not to touch them, but to hang the finished and washed print to dry, after which they will in most cases disappear and be hardly noticeable. They may also be gently flattened with a burnisher when the print is perfectly dry.

One of the advantages of enlarging on a board, instead of in an enlarging camera, is that the image is visible during the process, and the denser portions of the negative may be properly exposed, while the very thin parts may be held back, either by hands or with a piece of paper, this being the method known as "masking," frequently adopted in making sun prints. If there is a weak spot in a negative, such as a face in shadow, which would ordinarily print too dark, a small piece of black paper can be pasted on a large piece of glass, and held during a part of the exposure in front of the portion of the image requiring lighter printing. If the glass is held about half way between the lens and the print, and kept in motion, any sharp lines of masking will be avoided. The operator should estimate the relative exposures on the whole print, and of the part or parts to be held back, and time the printing accordingly.

Brush development effects may be obtained in bromide work by means of wiping out all parts which it is desired to have white or light on the print, with Farmer's solution. Take equal parts of a ten per cent solution of ferricyanide of potash and strong hypo solution, and dilute to suit your purpose. It is better for careful work to have three strengths of this solution, according to the effects desired. The reducing should be done with dry prints, so that there will be the least tendency to spread and reduce in the wrong places. Very artistic results may be obtained in this way by the clever manipulator.

Another effect with a rather weak Farmer's solution is to use it on a print which has been over-exposed and over-developed, and therefore too black for use. The use of the solution on such prints has two effects, to produce greater contrast by means of the greater action on the weak parts of the print, and to give an irregular reduction somewhat similar to the appearance of gum-bichromate printing. A bromide print made in this way, toned and waxed (with paraffine), has a very different effect from the usual bromide work and may be very artistic.

One more process will conclude this description of making bromide enlargements, and that is the new sepia toning of finished prints. This is greatly superior to the old sepia method with hypo and gives better tones. In order to obtain the best results the fixing must be absolute, as any undissolved silver salt will produce dark splotches in the sulphide bath. The formula is very simple. After the print has been thoroughly fixed and washed, make up a bleaching bath composed of equal parts of a five per cent solution of ferricyanide of potash, and a five per cent solution of bromide of potash, which may be used, either in quantity as a bath or by wiping over with cotton. As soon as the image has disappeared from the paper, it should be washed for a few minutes to remove the ferricyanide, after which the toning is effected by means of a five per cent solution of sulphide of potash. The toning is practically instantaneous and as soon as it has become full and uniform in all parts of the print, pour off the solution and wash once more for a few minutes, after which the print may be hung up to dry. The bromide-ferricyanide solution will probably not keep, but the sulphide solution is good until

exhausted. Separate solutions of bromide and ferricyanide will keep, but the latter must be covered with black paper to keep out the light.

This method produces rich colors and does not reduce the print, as with the hypo toning. However, as brown is not so strong as black, it is better to print and develop somewhat deeper than with a black print. In fact, dark prints may, at pleasure, be reserved for toning.

A very interesting experiment with sepia toning is to use the ferricyanide-bromide solution for bleaching in part only, that is to say, to pour it off and wash the print before the black parts are bleached. Reddevelopment afterwards, with the sulphide solution, will cause the lighter parts of the print to appear in brown, while the shadows remain black.

Sulphide of sodium is a black, amorphous deliquescent crystal. It may be put in a bottle with three or four times the quantity of water. Use a little, say a tablespoonful, in a pint of water, the exact proportion not being important. The only requirement is to obtain full action in restoring the bleached print. After the full effect has been obtained, there is no further action by the sulphide.

In the next article I will explain the method of making negative enlargements, and will give a special process for making exhibition negatives with all modifications required by pictorialists.



MORNING IN THE FARMYARD

First American Photographic Salon, Portland, Oregon

BY JOHN W. SCHRECK

The American Salon in Portland, Oregon

By WILL H. WALKER

One of the most important of the after-Lent events was the opening of the photographic salon at the new art museum. Its importance was not only in its own excellence but in the fact that this was the first opening of the handsome new art association home. It was, to be sure, only a preliminary opening, being made expressly for the showing of the splendid art exhibit that comes our way at this time, and only the upstairs could be opened.

The new art building is particularly attractive for its absolute plainness. There is no more ornamentation on or about the building than is absolutely necessary to identify it as an art building. And this is as it should be. Everywhere is the simplicity of elegance. The rooms are well proportioned, and well lighted; the windows are well grouped and well placed; the walls are calcimined or burlapped in a soft, easy color; the woodwork and floors are stained in a prettily harmonizing color which does not show dust or scratches easily; the doorways are amply large and yet not too large, and the rooms are easily accessible from one another. But there is no showy marble, no heavy frescoping, no elaborate ornamentation to detract from the art displays of statuary or paintings. The building throughout is a return to the simple and strong in architecture.

Upstairs are two galleries, well lighted overhead, which will be used for art displays of various kinds. These rooms were initiated by the photographic art salon, May 24th. They are finished in natural colored burlapping with oiled and waxed floors, and the woodwork is stained brown oak finish. In the angle formed by these two rooms is the art library which is finished in dark green calcimining with stained woodwork in a dull green. The curator's room off the other end of the lighted gallery and opening into the hall, is finished in the same manner as the library. The halls are in a soft pale green calcimining. The upstairs only was open to visitors. The work downstairs has been delayed to complete the upstairs rooms in time for this opening. The cast room down stairs is calcimined in green, and the lecture and art study rooms in burlap.

The Salon arrived in Portland in good order and was hung in the art rooms upon their completion. Local interest centers in the fact that Portland has four artists represented in five pictures, and one other Oregon artist, Mrs. Helen P. Gatch of Salem, with two pictures. The officers of the Portland society are: President, Will H. Walker; Vice-president, George F. Holman; Secretary-treasurer, O. M. Ash. The members, in speaking of their organization, always emphasize the fact that they are in no way in opposition to or in rivalry with the Oregon Camera Club, for many are members of both organizations. They have organized merely for united effort, and have as their object the general object of the federation—the advancement of pictorial photography, the encouragement of raising pictorial workers, and the development of new talent.

O. M. Ash of this city has two pictures in the collection, both water scenes, "The Mighty Deep" and "The Fishers." The former shows a small ship on the ocean just as a small squall is rising. The picture was taken from another vessel. Later the small squall developed into one large enough to sink that same ship.

Miss Bertha Breyman and George F. Holman, also of this city, have pictures which are typically Oregonian, especially the latter. "The Meadow," which is Miss Breyman's contribution, as its title shows, is a simple bit of landscape, well chosen and artistically finished. Mr. Holman's picture, "An Oregon Wild Duck Lake," is done in dark greens, giving the natural effect of the rich coloring about the marsh in the foreground and the brush about it and the fir-covered "buttes" in the background. The picture signed by Cora T. and Will H. Walker is called "White Death" and shows a bit of Montana country after an unusually heavy and blighting frost, which is weighing everything down to the earth with the burden. The detail work is good and minute crystals are plainly shown. Mrs. Gatch's work is in portraiture. "The Usurper" is particularly happy in its choice of title, showing a small boy eying enviously the affectionate attentions bestowed by the mother upon the little later-comer in her lap. The photographer was particularly fortunate in catching the injured, longing expression on the face of the older child. Her other picture is a portrait study, "Agnes."

The Salon offered by the Portland Society of Photographic Art can best be described by the simple word "fine." It is composed of the representative work of the best photographic workers. Prints from bromide of silver to carbon and gum-bichromate, having for their subject marines, landscapes, seas, river front and farms, still life, the prattling baby, the schoolboy, in all his boyishness, the man in manhood, the dawn of motherhood and the evening of life are all there. Quietness and hustle, summer and winter, youth and age, all take their place side by side and give to Portland such an art display as it has never had before.



THE MEADOW

First American Photographic Salon, Portland, Oregon

BY MISS BERTHA BREYMAN



WHITE DEATH

BY CORA T. AND WILL H. WALKER

First American Photographic Salon, Portland, Oregon

The attendance both afternoons and evenings during the exhibition was very large. The beauty and variety of the different methods employed in the production of the pictures displayed has created a wide-spread interest, and promises good results in this section for the 1905 Salon.

A Professional Photographer's Impressions of the First American Photographic Salon Exhibition

By CHARLES BUTTERWORTH

From an educational standpoint no exhibit of photographs has ever been made in the Pacific Northwest of such importance and value as the one recently displayed at the Portland Art Museum. It was impossible to get more than a general good impression on the first visit, because the continually recurring surprises in passing eagerly from one good picture to another, end in a confused jumble of impressions. It is only by repeated visits day by day, that the real excellence and charm of the individual masterpieces force themselves upon the attention from a background of such high average excellence.

For educational purposes it would be well for the visitor to remember that the entire collection is selected from many thousand photographs submitted to a



AN OREGON WILD DUCK LAKE

First American Photographic Salon, Portland, Oregon

BY GEORGE F. HOLMAN

jury of a dozen of the very best artists of the country—men who, if mad, have method in their madness—and they have pronounced this work to be good. It would, therefore, be wise to cast all prejudice aside, and try to discover why these pictures have been selected.

As the different schools of painting are recognized by the juries of the French Salon, and individuality is encouraged in the student of painting, and, as this exhibit also contains work of greatly differing technique, one is compelled to conclude that superiority of merit does not depend upon the sharpness nor the fuzziness of the pictures, nor upon their color or technique, all of which may be compared to the language in which thoughts are expressed. Victor Hugo wrote "Les Misérables" in French, Goethe wrote "Faust" in German, Thackeray wrote "Vanity Fair" in English, but the linguist enjoys them all. Not how, but how well each tells its story will determine the ultimate success or failure of a book or a picture. Probably no craftsmen are more prone than photographic workers to adopt some one method of working and make use of it, sometimes, unfortunately, until it degenerates into a mannerism—but this undoubtedly tends to develop the style to its greatest perfection. Judicious selections of masterpieces from all these different "schools" have made this collection what is probably the most comprehensive compendium of progressive and artistic photography ever brought together, and no photographer, professional or amateur, can afford to miss this unprecedented educational opportunity.

In our own exhibitions of professional photography we too often see the commercial idea in the work, which, on account of the prejudices of the photographer and the preferences of the subject, generally lack the simplicity, spontaneity

and freedom which are so charmingly apparent in the Salon exhibit. It is evident that the pictorialists who made this work have fortunately been untrammelled by any notion of values other than those of light and shade, and have, therefore, been perfectly free to reproduce, each in his own way, whatever they have seen and felt in the subjects before them.

Much as we regret to say it, the work of those who have adopted the methods of the professional photographers is the least interesting. Fortunately, however, the stereotyped "Photograph Gallery Portrait" has almost disappeared from exhibitions of the higher order, and in place of the conventional poses, lightings, and retouching methods, we have simplicity, naturalness, truth—truth not always recognized at first glance, but which is there nevertheless, and will live. To the professional photographer, who will study this exhibit to learn what it may teach, it will serve as a revelation of unsuspected possibilities that will lead the way into a broader field of accomplishment and enjoyment. But he who can see no excellence in any work that is not done in the manner in which he would have done it himself, will certainly lose by far the greater part of the possible pleasure and benefit, which might be gained by a more humble and unprejudiced study of these masterpieces. The gentlemen who have worked so arduously and unselfishly to make this exhibition a success deserve our thanks and our congratulations.



WHERE THE SILVERY COLORADO WENDS ITS WAY
First American Photographic Salon, Portland, Oregon

BY EDWARD H. KEMP



THE OLD-FASHIONED GIRL
by MISS FEDORA E. BROWN
First American Photographic Salon, Portland, Oregon

Photographic Possibilities at the Lewis and Clark Exposition

By FRANK L. MERRICK

Work on the grounds and buildings of the Lewis and Clark Exposition at Portland is being rapidly pushed toward completion. With more than two months still remaining before opening day, June 1st, the Western World's Fair is having its finishing touches applied.

It has been the aim of the management ever since the Fair was conceived to have everything in readiness when the gates were opened to the world, and its expectations are now promised fulfilment. An army of workmen has kept at work steadily, sturdily and strenuously all winter, the mild Portland weather permitting the work to progress without interruption. Spring finds all the main exhibit palaces finished, except the Liberal Arts Building and the Art Palace. The unfinished structures are backward because they were not originally included in the plan of the Fair. The Liberal Arts Building was made necessary by the great demand for exhibit space, and it was only after the Exhibits Division had received applications for more than one hundred thousand square feet of space, for which there was no provision, that the management decided to erect an additional building for this classification. The art exhibit was originally intended for one of the other exhibit palaces, but when space was at a premium, it was decided to build a separate structure to house the display. These buildings are now nearing completion. The official report of Director of Works, Oskar Huber, shows that the exhibit buildings are ninety-seven per cent completed.

Almost every nation of the world will be represented by a comprehensive display. The cream of the foreign exhibits at St. Louis have been transferred to Portland and have been supplemented by new and attractive features. Among the participating nations are: England, France, Russia, China, Japan, Italy, Austria, Hungary, Australia, Holland, Switzerland, East India, Egypt, Persia, Turkey and Algeria.

The beauty of the site and the superb view to be had from it, coupled with the artistic grace of the buildings, will be an agreeable surprise to all visitors. Nestling at the base of the foothills of the Cascade Range, on the gentle slopes and terraces overlooking Guild's Lake and the Willamette River, with an unobstructed view of sixty-five miles, which embraces the snow-capped peaks of Mt. Hood and Mt. St. Helens, the site presents a picture entirely original in exposition building. There is no need here to build papier-maché mountains as scenic accessories for refreshment purposes. One may sit in a commanding roof garden, and, while dining, drink in the pictorial sublimeness of real snow peaks of mountains that rival the Alps in grandeur. Of the gross area of the site, one hundred and twenty-six acres are on the mainland and sixty acres form a peninsula extending out into Guild's Lake, a fresh water body two hundred and twenty acres in extent, which is separated from the Willamette River by a narrow strip of land.

Many features not possible at previous fairs are found bordering on that lake, which is the largest body of water ever enclosed within an exposition fence. The mainland is connected with the peninsula by the Bridge of Nations, which



LANDSCAPE
by C. M. SHIPMAN
First American Photographic Salon,
Portland, Oregon

is a half mile in length, being the longest bridge ever constructed at an exposition. It is built of wood and staff in imitation of solid masonry. On the mainland end, the bridge is one hundred and seventy feet wide and this portion is given over to the Trail, the gaiety boulevard of the Fair. The unrivaled water facilities thus offered have been utilized by the concessioners for shows embracing elaborate water features. The buildings on the Trail are now under construction and will soon be ready for the barker to take his place in front.

The Grand Esplanade, a boulevard erected on piles over the water, extending for more than half a mile around the shore of the lake, will be the most popular promenade both day and night. It is built of wood and staff, and is thirty feet wide from railing to railing. The walk starts at the main boat-landing at the foot of the Grand Stairway, crosses the Trail, where the latter joins the Bridge of Nations, and terminates at the American Inn, a six-hundred-room hotel in the western part of the grounds. From the Esplanade a comprehensive view may be obtained of the main picture of the Exposition. On the mainland on the crest of the grassy slopes leading down to the lake, is situated the main group of exhibit palaces, consisting of eight structures, their coats of white staff making a striking contrast with the fir-covered foothills of the Cascades in the background. These buildings, which form nearly a straight line with their short sides facing the water, are: Agriculture, European Exhibits, Liberal Arts, Oriental Exhibits, Forestry, Mines and Metallurgy, Fine Arts, and Machinery, Electricity, and Transportation.

Leading down from Lakeview Terrace, which stands at the end of Columbia Court, the main plaza of the Exposition, is the Grand Stairway, flanked on either side by massive balustrades supporting statuary. On each side of the stairway are flowered terraces interspersed with benches where the visitor may rest. Here at night on this entrancing spot with thousands of lights reflected in the waters of the lake, the visitor may listen to the band concerts and view the pyrotechnic displays and other outdoor features.

Along the shore of the lake are situated some of the state buildings, including New York, Washington, Utah, Idaho and Pennsylvania. On an eminence in the western part of the grounds are situated the Massachusetts and California Buildings. Across Guild's Lake, on the peninsula, the United States Government Buildings loom up in imposing grandeur. Far in their rear, but appearing to be only a few miles away, Mt. St. Helens and Mt. Adams bound the horizon. The main Government Building is surmounted by two towers each two hundred and sixty feet high. Connected with it, on each side, by artistic peristyles are the Territorial and Irrigation Buildings. Near the latter stands the Fisheries Building and on the western shore of the peninsula is the United States Life Saving Station. Guild's Lake will be plied by many different kinds of craft, and those who do not care to walk to the Government Peninsula by the way of the Bridge of Nations may embark for a delightful water trip in either a Venetian gondola, a row-boat, an electric launch, or a canoe propelled by a real American Indian. In the Willamette River, near the Peninsula Entrance, during the Exposition, will be stationed war vessels of our own and foreign navies. This feature was not possible at previous fairs, and will give the inland sightseer a chance to inspect the fighting craft perhaps for the first time.



BY THE POOL
by GEORGE WHITEHOUSE
First American Photographic Salon,
Portland, Oregon

The main entrance to the Exposition is through an ornate colonnade of Corinthian columns. On the facade is inscribed the prophetic words of which the Exposition is the fulfilment, "Westward the Course of Empire Takes Its Way." On the left of the entrance is the Administration Building, and on the right stands the Fire Department structure. The Oregon State Building, a handsome structure where the "Webfoot" State will welcome the world, stands to the left of the entrance.

All of the main exposition structures are in the style of the Spanish Renaissance except the Forestry Building which is a true American type, being constructed of huge logs in their virgin state, thus exemplifying in its composition the timber resources of the Columbia River region. The structure is two hundred and six feet in length by one hundred and two feet in width, and its extreme height is seventy feet. In its construction two miles of five and six-foot fir logs, eight miles of poles and tons of shakes and cedar shingles were used. One of the monster logs weighs thirty-two tons, and many of this size were used.

Everywhere the eye of the visitor is charmed by beautiful landscape effects. Man and Nature have worked hand in hand to make the scene one of rare attractiveness. Here Nature has done what it would have taken years of skilled labor and millions of dollars to even partially create. Vistas of hill and dale, which were created at other expositions only after years of work by an army of workmen, are found here as Nature laid them out centuries ago. Where imitation mountains were erected at former fairs, Nature has raised snow-covered peaks to please the eye. Where trees were set out to afford shade, Centennial Park, a natural woodland of trees and shrubs, invites the visitor to shady paths and restful retreats.

What Nature has left undone, man has accomplished. Upon the slopes leading down to the lake are terraced gardens, and the open spaces between the buildings have been enriched with flowers, fountains and statuary. Twenty thousand roses bloom in a garden overlooking the Experimental Gardens, where all the different kinds of crops raised in the Pacific Northwest are growing side by side. Sunken gardens of exotic plants grace Columbia Court and the open space in front of the Government Buildings.

The radiant beauty of the night scene will surpass all expectations. In the creation of the night picture, every builder's art has a share. The architect's rich designs, the landscape gardener's clever arrangement of fountains, plants, flowers, and trees all take on a new beauty under the electric glow of more than a hundred thousand bulbs. While the buildings are reconstructed in fire for the night view by means of the restive shimmer of countless filaments, the picture is accentuated by the piercing rays of searchlights from the towers of the principal structures. The reflection of the lights in the water of Guild's Lake, adds brilliancy to the scene. On the bottom of the lake, along each side of the Bridge of Nations, electric bulbs placed in air and water-tight receptacles, illuminate the water, and enable the visitor to see the fish swimming about.

The people of the East and Middle West will have the greatest opportunity ever offered to see the country this summer. The railroads, on account of the Lewis and Clark Exposition, have made unprecedented low rates to Portland. The rate from Missouri River points will be forty-five dollars for the round trip. From Chicago, the fare will be fifty-six dollars and fifty cents, and fifty-two dollars

will purchase a ticket from St. Louis. From the far eastern points, the rate will be one fare for the round trip. These tickets will be good for ninety days, and will provide for liberal stop-over privileges. Portland offers many side trips which embrace some of the finest scenery in the world. In a few hours one may sleep at Cloud Cap Inn, a hotel on the side of Mt. Hood, and in the morning climb the mountain in true Switzerland style. Three hours by rail finds one at the Pacific Coast which abounds in unrivaled beaches and places of historical interest. Up the Columbia, through Columbia Gorge and The Dalles, is a trip well worth the journey across the continent, and the scenery viewed will never be forgotten. There are numerous other points of historical and scenic interest that may be taken in at small cost and the little time the visitor has at his disposal.

Ample accommodations have been provided for the thousands who will visit Portland this summer, and reasonable rates have been assured by written agreements between the hotel and lodginghouse-keepers and the Exposition Accommodation Bureau.

A. Horsley Hinton, writing in *Camera Notes*, says: Art, whatever the means employed to express her inspirations, may have many phases, many moods. There may even seem many degrees of perfection, according to the power of him whom the gods have chosen to carry out the thought that began with them. But that which is produced is either artistic or it is not. There should be no middle stage called pictorial in which to rest content, because the object of the picture is to accomplish the artistic and to stop short is to acknowledge incompetence and defeat.

I submit that it is arbitrary and unwarrantable to say that in producing, not a specimen of photography but a picture by the application of photographic means a man may employ lead pencil to retouch the shadows, or he may increase density by chemical deposits on the film; but he may not use the blacklead pencil or brush in any other way, nor increase density by using tracing paper or paint, or anything else.

The end in view, namely, a picture, justifies any means being employed; *the end attained* confirms the justification after they have been used.



PRODUCTS OF THE GOLDEN STATE

BY R. S. REQUA

The Studio vs. the College as a Means of Learning Photography

By MISS WINIFRED M. GARDNER

I first became interested in photography about five years ago. Beginning with a small kodak like many others, I kept on snapping films by the dozen or more, always hoping to get better results next time. However, I was compelled to hope on. Of course, I learned but little in this way, as my eye had not been trained to see form, line, perspective, light and shade. I was deceived over and over again by color. Color is the first thing which catches the eye. We are often so carried away with color in an object or landscape that we do not look to the drawing, to the light, and to the shade, which are the prime factors in photography. Photography is contagious, even the very first stages hold one, and there is no getting away.

The first few years I expended enough in photographic material to have defrayed expenses for six months at a college where I would have been instructed along the right lines, and have saved both time and money. However I did not know that then as I do now, so kept on in my "natural bent" always hoping that by some turn of luck my negatives would be better next time. Later, I came to a western city where I saw some fine work. I began studying the photographs in the better studios and the old liking for the work came back stronger than ever. At last I decided I would take up retouching. I had learned a little of the rudiments of it from a friend who owned and operated a studio in New York City. I had, however, never obtained an idea of modeling. I began my study by visiting different studios and asking for old negatives, not realizing it would be a hard matter to get them. At the first place I called they told me they never allowed their negatives to go out of the studio. At the second place they sold them by the hundred, but not until they had scratched the faces. At other places they simply said "no." After calling at five studios I began to feel discouraged, but decided I would visit one more, which proved to be my "lucky star" as I returned to my room with a dozen poorly lighted and badly developed negatives. However, I did not see the weak points then, but began at once to make an easel out of two grocery boxes which answered the purpose. I began taking my retouched negatives to some of the studios. "Fools rush in where angels fear to tread." It is often so with beginners. So I visited these places believing my retouching was fairly good. I had, however, to learn over and over again that it was no better than almost the poorest.

After a time I secured a place in a studio as an apprentice at very low pay. Here I remained during the summer but advanced little as one is apt to become more mechanical while retouching for an employer at the start. The beginner has no real foundation, and few methods. He is feeling his way, so he retouches as his employer wants him to do, not as he himself wishes. Thus he goes on grinding out negatives, expressing no individuality, and sooner or later he finds himself in a rut, and no better than a piece of machinery. He can not give one good reason for retouching as he does.



THE SPINNING WHEEL

BY WINIFRED M. GARDNER

After working a while the business became dull, so I went into a larger studio, one of the best in the city. There I was absolutely at sea, not knowing *well* the principles of retouching and having no foundation upon which to build. Many different papers are used in the first-class studios today and each paper requires an entirely different treatment in retouching. This calls for a knowledge of modeling, light and shade, as well as a thorough understanding of printing—how different papers print out—and just how to retouch for each paper to obtain good results. Unless a beginner has had this training he will find himself at sea. I believe a knowledge of operating, that is, modeling under the skylight, also is necessary in order to obtain good results in retouching. Unless one's eye has been trained to see modeling under the skylight it will be a long time before he will understand modeling on the negative. My opinion is that even a few lessons in operating, lighting, modeling, and the like, by a good instructor will save a beginner many weary hours of toil in retouching.

To return to studio work I must say I was more confused as to true methods in retouching the longer I worked. The employer in studios has no time to devote to instructing his retoucher or in explaining the many little things which go to make up the work—step by step. It is not his business, he is paying his employee to retouch, not to ask questions. The principal business in a studio is the making of photographs for customers, and not instructing pupils.

One day while at this studio I saw the California College of Photography magazine. I took it home, and read it thoroughly, and decided that very night to attend that college. I went to work the next day with that in mind and worked for six months with that aim in view. At the end of that time I started for Palo Alto, although I received discouragement from *all* professionals and many others. I felt, however, a college of this kind must be a great benefit; professionals in other lines find it necessary to attend colleges and schools of training, why not *photographers*? I am greatly surprised at the opposition which this college meets by professionals, after having been there and knowing the actual benefit one receives in even a short time.

The rooms of the college are large and airy, and the building is supplied with all modern conveniences. It is, in fact, exceedingly well equipped. The environment which goes a great way in this work is the best. It is uplifting, and contagious; one is inspired to do better work. Other students are doing good work and keeping the standard high, and there is something ahead to work for.



STUDY

First American Photographic Salon, Portland, Oregon

BY ALFREDO ORNANO



ON COCOANUT ISLAND
by R. H. BOWMAN



CAMERA CRAFT

ISSUED MONTHLY BY

The Camera Craft Publishing Company

114 GEARY STREET, SAN FRANCISCO

Edited by FAYETTE J. CLUTE

VOL. X

SAN FRANCISCO, CALIFORNIA, JUNE, 1905

No. 6

A Disadvantage

Publishing a photographic magazine is not a difficult matter, if I may be pardoned for stating so obvious a truth. Where the difficulty comes in is in publishing one that will meet with the approval of its readers, one that will appeal to prospective subscribers and one that retains the appreciation of its supporters. A publication in the general field is assured of a wide clientele if it but secure the work of good writers and illustrators. The field is wide enough to allow of a wide divergence as to policy without endangering success. A photographic publication has a field more circumscribed and finds its lines more closely drawn. Besides, it has no way of determining just what its readers most appreciate. It is for this reason that we always welcome criticism and suggestions. If you think a certain class of articles are helpful, if you can suggest subjects you would like to have treated, or if you think other matter lacking in interest to our readers, let me hear from you. It is a difficult matter to please when your wishes are unknown.

A New Firm of Portland Photographers

Frank C. Bangs and L. E. Conness are meeting with the success that their popularity and their desire to please assured them from the start. Their studio in the Atkinson Building, 731 Sutter Street, this city, is a model of neatness and convenience. CAMERA CRAFT, knowing both gentlemen and knowing them as enthusiastic and enterprising young men, wishes them all success.

Our Next Issue

Our next issue will contain the concluding article of the series by Mr. Zimmerman. In it he will tell how enlarged negatives of artistic quality for carbon printing and other large exhibition work are made by an expert in that line. Frank Morris Steadman of light measurement fame will give an interesting discussion of various applications of his method, showing, and describing, among

other examples, the production of a view taken by moonlight. Mr. Roloff will describe a serviceable and easily constructed storm cover for a camera. A very practical article in sepia platinum paper will be included, if the proposed illustrations showing appearance of print when printed and when developed, can be prepared in time. Many other good things await space, and the usual departments will be as strong as ever.

Camera Craft Abroad

It is rather unusual for articles in American photographic publications to be translated into German and French for use in the photographic publications of Germany and France. However, three such translations in full have recently appeared in as many foreign journals, and what is an additional source of gratification to us, all three are credited to CAMERA CRAFT. The policy of this magazine is to publish original matter. That our readers appreciate our efforts we are convinced, and it is but natural that our over-seas contemporaries should turn to our pages for material most likely to prove interesting to their readers.

Our Process Department

With this issue we will discontinue The Process Worker to make room for the new department of Criticism. While we print a large number of pages each month we find that it does not always permit of the desired space for articles of general interest. For this reason the number of pages given to department matter could not well be increased. The process department will be discontinued but the same attention will be given to inquiries on matters connected with process work as heretofore; the only difference being that all replies will be furnished individually by mail instead of through the pages of the magazine as heretofore.

A Suggestion

A valuable suggestion came recently in a letter from an old friend of CAMERA CRAFT. This gentleman has been in the habit of ordering a bunch of back numbers sent to various addresses. In the letter before me he explains that these packages go to beginners whom he meets. He goes on to say that a photographic book does not become antiquated for several years and a good photographic magazine should retain its value even longer. With our files badly broken, several recent issues being practically out of print, we have no use for such back numbers as remain on hand and for that reason we will gladly send them out, twelve assorted copies for fifty cents.

Our Loss

At San Diego, Wednesday, May 10th, R. H. Furman passed away. His delightful personality, his sincere and kindly nature together with his well-stored mind endeared him to all with whom he came in contact. By his death photography has lost an exponent of which it may well be proud, and those who knew him have lost a friend of whom they have the highest esteem.



The Critic and The Print



By WILL SPARKS

This department is intended to benefit those striving for artistic quality in photography. Prints of all kinds will be criticized, and attention called to errors of composition, arrangement and light and shade. Wherever possible a remedy will be suggested that it is hoped will aid the worker in the future. Send prints for criticism addressed, The Critic Editor, CAMERA CRAFT, San Francisco, California.

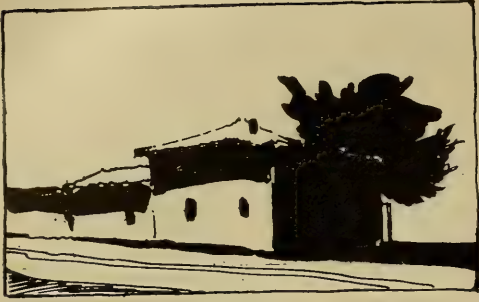
In attempting to criticize a photograph an artist is confronted with a complex problem. He knows that the photograph is "as the scene was" and at the same time it may be plain that the photograph is far from being a picture as a painter judges. To begin we must separate "representation" from "picture." In one sense the two are the same; in another sense they are as wide apart as the suns. Every photograph is a representation, but, from an artistic standpoint, every representation is not a picture no matter how made. To judge of a painting there are dozens of things to be considered; to judge of a photograph the critic is practically limited to composition and tone, which, of course, includes light and shade. And in making suggestions there is another limitation in "could" and "might." For instance, if the camera were set in the middle of the street the picture "could" be taken many different ways by the pointing of the lens or the moving of the tripod. In the same sense we can say that a print "can" be improved in composition by trimming, etc. In the case of "might" we will take a picture of a building which would be improved by being smaller on the plate. That is with more surroundings. But in order to get such a view it would have been necessary for the photographer to have moved farther away. This, however, "might" have been impossible, as for all the critic knows the camera at the moment of exposure might already have been backed up against a dead wall. So in making these criticisms I shall confine myself principally to composition, tone, line and subject and shall in suggesting improvements use the word "could" and "might" with great care.

To begin with I shall take up an old subject because it offers an opportunity to explain several important points that will have to be understood later on.



OLD CUSTOM HOUSE, MONTEREY, by L. D. Here is a most interesting subject; in fact one of the most interesting in all California. The selection of the subject and the point of view is good but might have been better if a very little less of the shadow end of the building were shown. As it is the two sides are too nearly the same size to be really pleasing. The only objectionable feature is the telegraph pole. Now how can





No. 2

this picture be improved? Entirely by trimming. The picture is placed very poorly on the plate. It is too symmetrical and does not concentrate the interest. The little sketch, No. 1, shows one way of trimming by which the building is made to occupy a more important place, and the dark shadow of the tree



No. 3

put into a more pictorial position. No. 2 shows the building brought forward and the objectionable telegraph pole eliminated. From a pictorial standpoint either of these is the greatest improvement. Now it might have been possible to have used certain plates or color screens, to have taken the sky darker, in which instance we would have had No. 3, which is a composition and arrangement leaving little to be desired.

"GRACE," by G. L. A good photograph. No doubt this would be a pleasing picture to Grace's mamma and as such would be hard to improve for the expression of the little girl's face is animated and pleasing. The whole arrangement is what would be called "cute." As the print stands there is little possibility of making improvement. The figure is so close to the edge of the picture that it loses its relative size and has no



position. Look at it closely and you will see that you cannot determine how large the child is. The tone is quite pleasing and the illumination of the frock is admirable.

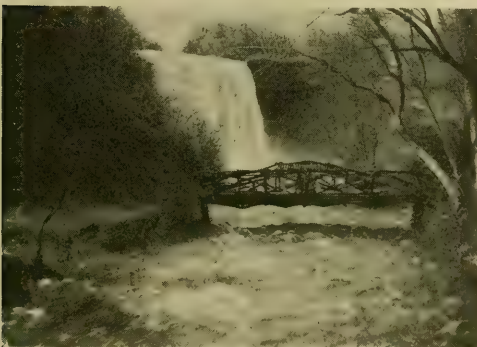


ONE SUMMER DAY, by A. W. B. This is nothing more than the portrayal of a view. The selection of the different objects was without judgment. The two trees on the same horizontal line at about equal distances from the sides of the picture are bad. The curve of the road should lead to something of interest but instead it only reveals a few very ordinary trees. The subject is one that an artist would never touch, but, if for any reason he had to, he would make



some effort to get an arrangement of light and shade like the sketch. This gives a little more variety of color. I would also suggest to have moved the camera from the middle of the road. The other two prints you sent were better but lacked concentration and the light and shade were not distributed well.

WATERFALL, by J. D. There is quite evidently something wrong with the chemical end of this picture as the values do not seem at all right. From the shadow I



but it looks as dark and fuzzy as the land. It does not suggest transparency. It might judge that the sun was shining on the water,

be that the water was yellow from mud, but in that instance it was bad judgment to take such a picture. The composition is not so bad, but by taking off a bit of the foreground it would be improved.



IN GOLDEN GATE PARK, by E. H. M. Here is certainly a most pleasing subject, well handled. I think it might have been improved by turning the camera to give a little more on the right and so cut off some of the meaningless dark on the left. By trimming off a little from the top and so eliminating the little bunch of leaves, will be a big improvement.

COMING RAIN, by W. B. C. This is certainly a pleasing scene and shows a fine conception of the beautiful in nature. The arrangement of light is good but it appears to me as though the upper part of the sky is too



dark for the rest of the subject. As a criticism of the composition, the two trees in the center are too symmetrically placed. There is no good way to improve one part of this print without injuring some other part of it. The light and shade are artistic but

the grouping of the objects is merely a representation. Composition is the proportionate arranging and unifying of the different features of a picture. Your picture shows a huddling that is unpleasant. Your other prints are not up to the standard of this one.

A BUNCH OF CARNATIONS, by B. C. This could have been improved greatly by using more taste and judgment, as the subject is entirely within the control of the operator. The placing of the vase is bad. The arrangement of the flowers, worse. The two dark



sprays on the table and so covering up the base of the vase, killing its position. The sketch shows how it could have been arranged.



flowers occupy the poorest possible positions being exactly opposite each other on the same horizontal line. The flower just at the top of the vase is very objectionable as is also the manner of scattering the



NATIVES BOARDING STEAMER, SOUTH SEA ISLANDS, by M. S. This is a type of subject from which very little artistic effect can be expected. It is a very good illustration and certainly represents the scene graphically. Had it been possible to have held the camera a foot or so farther over the rail there would most likely have been considerable improvement.

California Camera Club Notes

Spring Outing

The advent of spring was taken advantage of by about one hundred members of the Club on May 14th, when a most enjoyable outing was made to Glen Ellen, at the head of Sonoma Valley. It was called by the Outing Committee, a "Wild-flower Outing," and it certainly justified the name.

Regular Meeting

The regular monthly meeting of the Club was held in the clubrooms on Tuesday, the 9th of May. After the transaction of the regular business, in the course of which President Eisen announced the different committees for the ensuing term, an interesting lecture on lenses.



The Amateur and His Troubles



By FAYETTE J. CLUTE

This Department is especially intended to assist the beginners. However, many of the more experienced workers also make mistakes. All readers of CAMERA CRAFT are invited to tell Mr. Clute their troubles. Address all communications to Fayette J. Clute, Editor of CAMERA CRAFT, San Francisco, Cal.

An Acid Fixing Bath

A reader in Oregon is having trouble in mixing up an acid fixing bath. There is either a cloudiness of the solution or else a precipitate results. I do not know just how the formula reads but I would suggest it be compounded as follows: Dissolve the sodium sulphite, using four ounces of water to each ounce of the salt. Dissolve the alum, using sixteen ounces of water to each ounce. Dissolve the hypo in the remainder of the water called for by the formula. If the sulphite solution be poured into the one containing the alum, stirring all the while, and then the acetic acid be added, there will be no precipitate and the mixed solutions can then be poured into the hypo solution, leaving it clear and free from deposit. Such a bath keeps better than a plain solution of hypo and has a clearing effect upon plates and paper. To find out from time to time whether the bath still retains its fixing power or not, it is well to test it by inserting the corner of a small plate that has not been developed. I have a friend who saves all his stale or doubtful plates and has them cut into strips which he uses in testing his fixing bath for Velox paper.

A Film Album

A writer in the *Columbia Camera* tells how to make a film album and one that looks, from the description, as if it might be quite a convenience. The cost is trifling and the work is simple. Take fifty ordinary envelopes and fold them, flap side in, perpendicularly through the center. Apply paste to one of the outer sides made by folding and bring in contact with the opposite outer side of the next and so on with the entire

fifty. The result will be a book-shaped collection of pockets which can be fitted with a card-board cover pasted on the two end envelopes. The flaps of the envelopes cannot be raised until the particular envelope from which it is desired to remove the contents is opened flat. This prevents any danger of the contents slipping out except when wanted. The album can be opened perfectly flat at any particular pocket and the flaps form excellent tabs upon which to write the titles of the negatives. I might add that the *Columbia Camera* is a neat little monthly, brimful of good things and issued by the Columbian Photographic Society, 1811 North Broad Street, Philadelphia. It is only fifty cents a year.

Amidol Stains

You all know I am partial to Amidol as a developer for the regular bromide papers and those of the gas-light variety. Recently a worker came to me who had been following my advice in the matter, only to be troubled with an occasional mahogany-colored spot that extended right through the paper. I found he had been weighing out the chemical on the same bench that he used for his blotters and his mounting operations. Small particles of amidol had been thrown around by careless handling with the result that they eventually came in contact with the wet surface of a print, practically spoiling it. While I have always weighed my own amidol out into little paper packets or discarded M-Q tubes and had no difficulty I advised my friend to get a supply of these tubes, get his druggist to fit them with soft, smooth corks and then weigh out his amidol into these tubes in another room. There

is no excuse for a person condemning such a fine developing agent just because he is too careless to weigh it out carefully. He would have trouble with any photographic process.

A Barium Chloride Focusing Screen

A correspondent asks about the method and I can only suggest that he give it a trial. While I have never experimented with it myself the method has had the endorsement of several reliable journals; the *Photo Beacon* being the last. Briefly, an unexposed plate is fixed and washed, flooded with a ten-per-cent solution of chloride of barium and then with a like solution of chloride of magnesium. The resultant plate on drying is said to be superior to the finest focusing screen that can be bought.

Focusing

Herr Scholik in the *Photographischer Notizbuch* tells how to make the best of the depth of focus given by any particular stop and do it without undue straining of the eyes. The most distant object desired sharp should be focused and the selected stop inserted. Next note the nearest point made sharp by the insertion of the stop, remove the stop and focus sharply on that point. Reinsert the stop and the operation is complete. In portraiture and still life subjects the process should be reversed. Commence by focusing the nearest object desired sharp and then proceed to the distant point. Simple as this seems it is evident that it is only of value to the worker with a keen appreciation of the power for good which the subordination of certain parts of the picture may give. The worker who desires his pictures to be sharp all over should proceed as usual.

Stripping Films From Ordinary Plates

The great trouble in recommending any particular plan of stripping films is the fact that not all plates work alike in this respect. Again, negatives that may be stripped easily within a few months of having been developed will sometimes prove quite refractory if allowed to become old and hardened. I would advise my correspondent to find, if possible, a waste negative of about the same age and on the same brand of plates and experiment with this before undertaking to strip the one desired, particularly if this latter is a valued negative. A good method

is as follows: Immerse the negative in a solution composed of formaline, ten ounces; water, twenty ounces and glycerine, one ounce. Allow it to remain in this for ten minutes, drain off surface water, cut through the film near the edge all around, then immerse in a ten-per-cent solution of washing soda for five minutes and then for a like length of time in a five-per-cent solution of hydrochloric acid without washing. The film should be easily stripped and it should be so tough that it can be washed and handled quite conveniently.

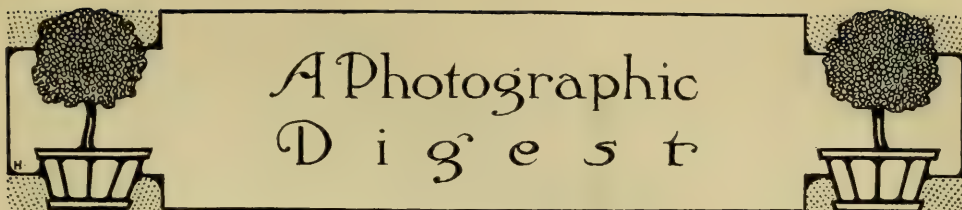
Toning Bromide Prints

A correspondent in Ohio writes that he has a number of fine Bromide and Velox prints that are very pleasing in all except the color which is a rusty sort of brownish green. He wishes to know if they can be improved in any way. Here is a plan I can not vouch for but it was given me by a local worker who produced some good results by its use. The prints are placed in water and allowed to soak until limp. They are next placed on a sheet of glass and the excess of water gently squeegeed off. Using a soft camel's-hair brush, paint the prints over with the following solution after becoming cool:

Potassium sulphocyanide	30 grains
Gold chloride	2 grains
Hot distilled water	4 ounces

Platinum Toning of Plain Paper

A local reader wishes a toning bath that will give platinum tones on plain salted paper. Immerse the print in salt and water for five minutes and then tone. A bath composed of one grain of chloroplatinite of potash to an ounce of distilled water to which has been added a quarter of an ounce of dilute phosphoric acid, makes a good toning bath. It can be painted on with a soft brush as advised for toning bromide prints. The prints, when the desired tone has been secured, should be well washed and then fixed in an alkaline fixing bath. Speaking of the toning bath for bromide paper above, richer blacks can be secured on the plain paper by using the above bath first, washing well and then applying the sulphocyanide bath. The bath should be prepared with hot water and then allowed to cool. It can be painted on in the same way as recommended for the toning of bromide prints in the above formulæ.



By H. D'ARCY POWER, M.D.

All communications for this Department should be addressed to H. D'Arcy Power, M. D., 114 Geary Street, San Francisco, California. The Files of the Digest Department contain practically a complete set of Foreign photographic publications. These are open to CAMERA CRAFT readers for reference or loan.

On the Production of Brown Tones in Chloride of Silver Emulsions

The past month has been one of dearth in photographic novelties. Of the few papers dealing with original research the most important is that on the above subject by Dr. A. Eichengrun, reproduced in Gædicke's *Wochenblatt*, from which I translate the following account:

The author begins by a consideration of the effects produced by the over-printing of gaslight papers (Velox, etc.), and their development by edinol restrained by acetone sulphite. The formula he employed for this purpose consisted of:

Edinol	1 part
Acetone sulphite.....	5 parts
Sodium carbonate (crystals) ..	3½ parts
Water	100 parts

After experimentally determining the normal exposure, he gave from three to six times this amount, according to the result desired. Even under special circumstances the exposure may be twenty-five times the normal. The first-mentioned exposures give pure browns, the latter redder tones. These brown tones are better adapted to professional portraiture than the tints obtained by uranium or sulphur toning. Furthermore, says Dr. Eichengrun, the over-exposure permits of the printing of details which would otherwise be lost. He exemplifies this by the case of a negative of a landscape with clouds. A print made by means of one centimeter of magnesium ribbon yields a correctly graded print in a normal developer, but no trace of clouds; when printed by the light and 10 centimeters of ribbon the clouds appear in full detail, but

with the normal developer the print is gray and fogged. By using the above modified developer, the over-exposed prints yield beautiful brown prints with pure whites and all the cloud detail and landscape perfect. It would therefore seem as though we have here a means of getting both a longer scale of gradation and more detail from our negatives than can be obtained by normal development.

The author next attacks the question as to whether these effects are due to a specific action of acetone sulphite or, if not, in what way does this chemical differ from the other sulphites. To this question he returns the general answer, "that the production of brown tones in silver chloride emulsions is a result of development with little alkali, and is in its nature dependent on the amount of the contained sulphite." He says, later: "Quite astonishing were the results when development was undertaken with a developer devoid of alkali, containing only the reducer and sodium sulphite. This mixture developed not only over-exposed but also normally exposed gaslight papers with brown tones." Certainly, with a small amount of sulphite the development will require a great length of time; with three per cent of sulphite, half an hour; with ten per cent of sulphite, only six minutes, and with twenty-five per cent, five minutes. The tones thus produced fully resemble those obtained by over-exposure and acetone sulphite. So that one can by the use of edinol (1), sodium sulphite (10), and water (100) obtain brown tones with a normal exposure and without a great prolongation of the development time." The author does not, however, advise the use of this formula in place of the acetone sulphite developer, because, apart from the loss of

time in development, there is a more serious loss in the rapid deterioration of the developer, which is such as to make it impossible to develop several successive sheets of paper in the same developer.

The writer then shows that the brown color is not only dependent on the sulphite but also on the particular reducer employed. Of those examined eikonogen alone yielded a warm brown comparable to edinol. Para-amidophenol gave violet-brown; pyro, unpleasant red; hydroquinon, yellow-red; pyrocatechin, unpleasant yellow-red; adurol and glycin, yellow-brown; metol an unpleasant tone, with a tendency to violet.

In the case of lantern-slides and transparencies coated with silver chloride, Dr. Eichen-grun finds the sodium sulphite developer more lasting, and with long development, continuing from half an hour to three hours, a variety of tints are obtainable, according to the reducer used; but here again the acetone sulphite developer with an over-exposure of from three to five times was found the most satisfactory.

Gum Ozotype

I referred in a previous number to the advantages and manipulations of the above method. The Ozotype Company have now taken the matter in hand and offer an improved technique and the necessary materials. A description of the new process by Robert Manly, the brother of Thomas Manly, the discoverer of ozotype, is given in the English *Amateur Photographer*, from which I give the following:

"I have little hesitation in saying that Gum Ozotype, after four years of continued experiments and much labor, is now practically perfected. Gum pictures can easily be produced equal in gradation to carbon prints. The principal new feature is that the initial prints, after spreading, should not be exposed to a drying atmosphere until the reducing action is completed.

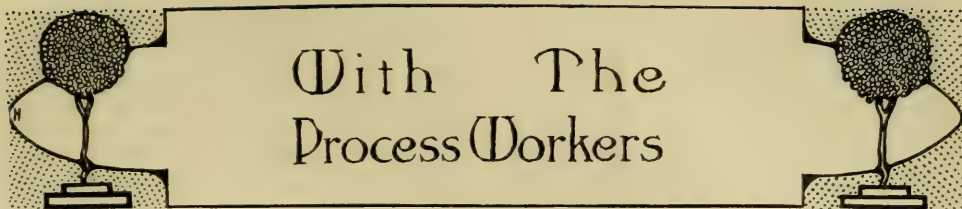
"The process is so simple that it can be described in a few lines:

"Make an Ozotype initial print on weakly sized or unsized paper. Spread with a solution of Gum (1 in 2), to which the requisite pigment and acid reducing solution have been added. Hang up in a damp cupboard for about an hour or longer and develop in cold water. This is the whole process. Neither actinometer nor finishing alum bath are required. Spreading can be done with a

varnish brush, no expensive softener being necessary. Brush marks, if confined to the top surface of the gum coating, will disappear in development. In most cases the gum surface will be in a fit condition to develop with a soft brush after being in the developing water for about two or three minutes. After remaining during the specified time in the damp cupboard the prints can be taken out and dried in the atmosphere, after which they can be developed at any convenient time. There is no danger of the so-called 'continuing action of light.' Any depth of color can be obtained, as no light has to penetrate the colored film. When thick gum is used a certain amount of relief is produced, thereby materially aiding the gradation of color. This is preëminently the process for beginners in Gum work, most of the disadvantages and uncertainties of the old process having been removed; and it will no doubt be thoroughly appreciated by experienced workers in Gum Bichromate. All information and materials can be obtained from the Ozotype Company, 1 Weedington Road, London, N.W."

The Effect of Red Light on Exposed Plates

Joseph Gædicke, in his *Photographische Wochenblatt* of March 28th, gives the result of some experiments on the effect of red light. He points out that if a surface be coated with luminous paint and exposed to light it will of course be luminous in the dark. If, however, after exposing, one-half be covered with black paper and the other with a sheet of red glass and a fresh exposure made, and the plate again removed to the dark room, it will be found that the part shielded by the black paper is still luminous, but that which had been reëxposed through the red glass no longer emits light. It therefore seems that red light has the property of discharging the effect of white light in energizing luminous paint. Gædicke conceived that a similar discharging effect of red light might occur with the latent image, but experiments with dry plates gave negative results. Recently Villard in a paper to the French Physical Society stated that the P. O. P. (solio for example), slightly tinted by exposure could be bleached by submission to the action of red or ultra-red rays. This statement was submitted to test by Gædicke not only with a negative result, but he actually found the tinting increased by the action of the red light.



By WILL SPARKS

In this Department questions addressed to CAMERA CRAFT, regarding photo-engraving, will be answered with care. Due research will be made wherever it is necessary for a correct answer. The experiences of printers and engravers are requested, and any suggestions will be gladly received. An effort will be made to supply the best information obtainable regarding the working and development of the three-color process. If you have any unusual experience with your work or have trouble with your chemicals, write to The Process Worker, CAMERA CRAFT.

Future of Three-Color Work

Prof. Dr. Aarland contributes the following to the *Process Year Book*, and it may be taken as a conservative statement:

"The three-color print, which now for a series of years has been employed in various ways for illustrative work, is still in a stage where great improvement is needed. * * * Of all the three-color work turned out only a very small percentage can be regarded as good.

"Many advanced artists and art scholars will not have anything to do with colored reproductions of art subjects by the three-color process, because the results do not meet their requirements. Even so is it with the representations of colored scientific objects by means of the three-color process. For this work it is still not at all applicable. For representing the finest details of the delicate differences of color which one observes in the action of polarized light, and with spectrum experiments, etc., the present three-color process is much too crude, and in its handling quite unfit. Consequently all authors are afraid on these grounds of a colored picture, and restrict themselves to single color prints. These are difficult considerations for the future of the three-color print upon which on all sides the greatest hope is fixed. The three-color print will always be of a certain importance for every-day work, but in this case only if practised by really skilful workers.

"We have promised ourselves a great deal from the new sensitizers and, if one judges them according to the spectroscopic results,

they show decidedly great advantages in relation to these aims compared with the dyes formerly employed. Above all the high red sensitiveness of pinochrome and katachrome has been prominently shown. It is, however, a pity that with all the good qualities of the new dyes very little remains utilized, when one sensitizes these with plates which are employed for the taking of subjects by reflected light, also for paintings, nature studies, etc. Here all the new dyes from ethyl red to katachrome are equal to each other, that is to say, the red sensitiveness is quite a minimum. If one takes, under equal conditions, a color chart with plates sensitized with the different new dyes, the negatives are scarcely to be distinguished from one another.

"The light filters have been in many ways altered. If one but considers that almost every author puts forward particular color filters for his sensitizing method, so that filters in all color gradations are on the market, and that they attempt to back up their choice by learned treatises, one can hardly help smiling. One sees how much self-adulation these gentlemen introduce, and how little knowledge there exists regarding practical requirements. All these high-sounding advertisements amount to nothing, when we observe how pitifully alike are the results obtained with the different sensitizers for three-color work when applied to actual practise. Let it be well understood that I am only referring to such efforts, and not to scientific spectroscopic work, where entirely different conditions predominate.

"No real progress in practical three-color work is noticeable, and with regard to the purely technical side (the production of printing plates, printing inks, papers, etc.), no really new achievements have been made. The old methods are still generally in use, e. g., the gradual stopping out and fine etching to obtain the colors of the original. How far the result is successful depends entirely on the skill and the artistic training of the staff entrusted with the work.

"Perhaps the Schulze process of half-tone now in progress for three-color work may bring improvements in this direction, and we hope to be able to show in the next *Year Book* such a three-color print. However, even if the Schulze process does not bring the hoped-for advantages, three-color printing will expand in spite of its many shortcomings, provided it is worked within its limits.

Status of the Dry Plate for Process Work

The following from the pen of the well-known process worker, E. A. Brennan, is a valuable contribution showing the exact standing of the dry plate for process work:

"It is now some twelve years since I commenced using dry plates for process work and during that time I have tested practically every make of process plate on the market. In the early nineties, there was not much choice, there being only about two makers who made a special plate, but they were so slow that they were very little use, except for line work, which could be done better and cheaper by wet plate. There was also, as now, the black toned lantern-plate, which suffers from the same defect, then we had a collodion dry plate, which was expensive, but promised great things and was a very successful plate when it was all right, but it proved unreliable in many ways; the speed was variable, even in the same box there would be a difference of twenty to twenty-five per cent. Then it was subject to streaks and the film varied in thickness from one edge of the plate to the other, and after a time the manufacture was discontinued.

As time went on, other makers offered process plates, but they simply copied those already on the market, with the same chronic complaint, too slow for half-tone, except for such copies as mat surface bromides, platino-types, or wash drawings, but as by far the larger proportion of half-tone copies are

silver prints, which are often of a very warm brown tone, these plates are all too insensitive to give a printable dot and render shadow detail properly.

The difficulty, however, was surmounted by using ordinary plates, which possess the necessary speed, but owing to the thickness of the film, coarseness of grain and lack of clearness, they are not exactly ideal for the purpose; nevertheless, by dint of perseverance, it has been found possible to produce half-tone work of the highest quality, and that with great regularity, by the use of dry plates.

The perfect plate, however, has yet to come; there is only one maker, to the best of my knowledge, who has approached it up to the present, and that only by studying the special requirements of the business. For the benefit of plate-makers who are interested in the subject, I would like to state what my ideal plate should be like. It should be fast, that is, of course, only relatively, I should say somewhere about four to five times faster than the plate usually made; it should be thinly coated but not too thin, as then it becomes too tender to handle. Also it should be nonhalation and color sensitive, sufficiently so to make it possible to use a yellow filter for copying colored originals; it must be capable of ample density, combined with extreme clearness, yet the gradation must not be too steep or the middle tones will suffer, and finally, it must be of the finest possible grain.

Surely, after all these years of experience, it is not impossible to produce such a plate. I am convinced that the future will see the dry plate used more and more for half-tone work, it has so many advantages; it only remains for the plate-makers to give the question the attention that it deserves.

A Couple of Pointers

In making a half-tone negative, the operator should make it a point to get all the detail contained in the darker portions of the copy—to this end it is usually advisable to have a tone through the entire negative. This rule will not, however, permit of universal application, as some classes of work look better with solid blacks. The dot in the high lights should be sufficiently large to allow for reëtching.

Upon the skill of the half-tone etcher depends largely the quality of the finished product. A half-tone should not be etched

too far before staging, as that makes the white dot larger than it should be, and, consequently, gives the finished cut either a flat or chalky appearance. When the darker tones are etched deep enough they should be stopped out and the rest of the plate should be continued, etching until proper depth and color are secured. On portraits and other work of that class the final etching should be done by hand, i. e., the etching solution should be applied with a brush. This gives a half-tone that soft blending so much sought by high-class illustrators. By skilful staging and re-etching it is possible to improve on a poor copy to a wonderful extent.

New Etching Machine

Although the "acid-blast" etching of Levy has been talked about now and then since it was first demonstrated in the Paris Exposition of 1900, nothing has been seen of the installation on the market. A Swedish inventor has now perfected a machine whereby extremely rapid etching with a comparatively weak acid is obtained in a different way. Levy sprayed the acid at high pressure over the plate. By the new method the acid is hurled against the plate by two disks, rapidly rotating in opposite directions. Messrs. Klimsch and Co., who are placing the apparatus on the market, claim for it that zinc half-tones are completely etched in forty seconds with a six per cent acid. It is found that a kind of automatic fine etching takes place, in consequence of the more rapid etching of the lights in comparison with the closed shadows. In this way good printing depth and brilliant lights are obtained without local varnishing of the plate and without fear of "graying" the shadows; under-cut was conspicuously absent.

New Color Process

If the claims of A. H. Leaman of Columbus, Ohio, are made good there is going to be a revolution in the engraving business, and incidentally the printing business also. But it is not yet time to worry. Like many other inventions this one is still tied up in the patent office and one must wait awhile for the "fairy tale" like claims to come true. However, we must give Mr. Leaman credence and it would be a good idea for all engravers to "keep an eye on him." Here is what he claims: Four colors can be printed from a single plate—engravings of any kind, half-tone or line etching. The process saves

seventy-five per cent of the cost of printing. It can be used on newspaper or job presses and on any kind of paper, from the cheapest to the best. Fine effects can be obtained by it, a dull, ordinary engraving being transformed into a beautiful picture that will immediately attract attention. The process has been fully protected by copyright.

A Few Words About Zinc Etching

The following paragraph from the *Progressive Printer* is a valuable one to the man who works over the tub:

The zinc-etcher should get a print that contains all the detail of the negative; and, in topping same, should avoid the use of rosin and similar powders which spread when burnt in. In the first and second bites care should be taken to powder close and not etch too far, by so doing the finer detail will receive plenty of depth—a quality much appreciated by printers. In the third and fourth bites the etcher should work for depth. To avoid getting a shoulder, the powder must be uniformly banked otherwise one part of the plate will be under-cutting before another is cleaned up. When brushing a plate in the bath, never apply pressure to the brush as that weakens the top and often causes corners to etch round.

Flashlight for Process Work

An English firm has put a new method of illumination on the market that looks as though it might be of use. But it is a big innovation. This is a "flash" candle that is as bright as any light. The candles will burn from twenty seconds to two minutes and are so strong that in an ordinary room pictures of moving figures may be taken in the one-hundredth of a second. Line negatives on the wet plate are made in ten seconds, and some half-tones can be made in one minute. The candle, as the illuminant is called, is made in all sizes to give whatever flash is required. If such a chemical will do all that is claimed for it there is no doubt but it will come into use.

To Make a Ground Glass

Here is a good method of fixing things when the ground glass breaks: Well fix a dry plate, then flood it with a ten-per-cent solution of chloride of barium, and follow this with a ten-per-cent solution of chloride of magnesium. Allow to dry, and a perfect focusing screen results.



Notes and Comment



California College of Photography News

Mr. J. C. Donly of Scranton, Pa., Mr. A. Yamamoto of Tokio, Japan, Mr. Gustav Wal-lin of Willits, Cal., and Mr. H. Raspe of San Francisco are among the new students entering this month.

Miss Maud E. Baldwin has returned to her studio at Klamath Falls, Ore., where she will continue her work. Miss Baldwin is an excellent photographer, and we predict a very successful future for her. During her course with us she exercised the greatest of care with all her work, which, together with her own natural liking for the photographic art, will prove of the utmost value to her.

The C. C. P. students are now furnishing colored lantern-slides for most of the local entertainments as well as for the various societies of the Stanford University. This is one of the ways in which it is possible for the students to "Earn while they Learn." In fact, counting all of the sources from which they obtain work, they are securing from \$8 to \$15 a week at the college. This amount comes in very conveniently for those with limited means.

The graduation season is drawing near and the college is alive with the bustle and excitement always preceding such an occasion. The students are preparing their exhibit, which is to be open for public inspection in the College Assembly Hall during Graduation Day. The evening is to be devoted to a lantern display and music, with orations and essays on photographic subjects which will be of interest and value to the general public, amateur photographers and the graduating students as well. Over a thousand invitations will be issued, and parties desiring to attend should notify President A. S. Dudley on or before the second week in June, at which time the program will be printed and ready for distribution.

Mr. H. W. Oliver, the Coast demonstrator for the M. A. Seed Dry Plate Company, gave a very interesting and profitable demonstration under the skylight on the 5th of May.

In the afternoon his talk on developers and developing provided excellent food for thought to the students.

With the exception of perhaps one week, there will be no summer vacation at the College. The regular Fall Term will open on the 4th of September, for which enrolment applications are now being received. Are you satisfied with your present occupation? Our catalog will interest you.

The Simplex Exposure Meter

The eye, to see an object clearly, requires that a certain amount of light fall upon its retina. Any slight variation of the intensity or brightness of the light affects the pupil of the eye, opening or closing it accordingly as the light is diminished or increased. The Simplex Exposure Meter detects these variations and indicates the exposure and stop for a perfect negative. The meter is to a certain extent a "measure," comparatively, of the diameter of the pupil of the eye, its reading coinciding with the pupil's variation in size.

The light that falls on the sensitive plate in the camera is the light radiated from the surface of the object being photographed. If it is of dark color and the surrounding objects are dark, there will be a comparatively small amount of light radiated from it. The eye, to see detail in such dark objects, opens its pupil the required amount. If one try to see the object through a hole in the meter that is too small, it appears dim. The desired detail can not be seen until one looks through the hole that is approximately the same size as the pupils of the eyes. The retina of the eye must be illumined by a sufficient quantity of light in order to distinguish an object clearly. The fact that the eye requires a certain quantity of light in order to see the object clearly makes the Simplex Meter a measure of the amount of light radiated from the object.

If the retina receives any more light than enough to see the object clearly, then the

object appears brighter or lighter, but no more of its detail can be seen than with less light.

The meter measures the volume of light by various sizes of holes, while the eye measures its intensity. The eye together with the meter, measure the quantity of light. The length of exposure required for a plate depends directly on the quantity, or amount, of light admitted to its surface. The advantages of the Simplex Exposure Meter are its accuracy and rapidity of determining the true exposure in either sun or gas-light.

Another Ray Filter Competition

Burke & James of Chicago and New York, have now had two Ray Filter Competitions, both of which were very satisfactory and successful, and they have therefore decided to have another one this year. Heretofore, they have always given away apparatus as prizes, but this year it is their intention to give cash prizes amounting to \$100. In 1902, their last Ray Filter Competition, they gave sixteen prizes, but this year they have not yet fully decided how many prizes will be given or the amounts. We can say, however, that all camera users will be eligible to this competition and that all pictures, either landscape or flowers, will be admitted. The principal conditions are that the pictures must be made through one of Burke & James' Ray Filters, either the "Ideal" or "Isochrom." These Ray Filters are for sale by all photographic dealers in the United States.

A Fine Photographic Cloth

The Sunset Bazaar, 42 Third Street, this city, has recently added to its stock a supply of the excellent photographic cloth known as Lusterine. Besides being a very fine article, easy to work and giving the most pleasing results, it is a California production, being manufactured by the Lusterine Manufacturing Company of Long Beach. This company was recently reincorporated under the laws of this State, having previously been located in Oregon. L. E. Grigsby, one of Southern California's solid business men, is President of the Company; G. A. Schaefer, the originator of the process, being Manager and Secretary. They have several men on the road and are shipping large reorders to foreign countries. Those wishing to turn their knowledge of photography to the best account should call at the Sunset

Bazaar and examine the fine samples of Lusterine prints that can be seen there. They will be surprised at the beauty and richness of the results that can be secured on this fabric.

A Fine Platinum Paper

The platinum paper being put on the market by the Platinum Manufacturing Company of Denver, is about as nearly perfect as a printing paper can well be made. Within the week we have seen some prints turned out on a sample of the paper that was sent to this office. The paper was given over to the first man who had the time to give it a trial and the results are certainly most pleasing. The gentleman who tried it is enthusiastic in its praise. Some papers may produce prints that look like platinum—poor platinum—but it would tax the capabilities of a pretty good paper of the platinum type to equal the prints that can be produced on this Denver production. The announcement that the firm makes on another page is inviting, and our readers should do themselves a kindness by giving the firm a chance to prove the worth of their production.

Colorprint on the Market

We are informed that *Colorprinte*, the remarkable new paper for making photographs in the colors of Nature, will be ready for the market by the time this reaches our readers. The advance sale has been extraordinarily large and we are asked to say that all orders will be filled in rotation at as early a moment as possible.

Dr. Wilhelm Hesekei, a brother and collaborator of the famous savant Dr. Adolf Hesekei, is now on his way from Europe to see that Americans are properly instructed in the workings of the new process. *Colorprinte*, while very simple is of such revolutionary nature that it has been deemed best to have the advice and instruction of one who has been connected with it from its inception, as in anything new it is hardly to be expected that the most perfect results will be secured at the first trial.

Burke and James New York Office

Our Eastern readers will be pleased to hear, if they are not already advised, that the New York office of Burke & James has been removed to larger and better quarters at 17 and 19 Waverly Place. The change

of address was made necessary by their increased business and it is hoped that this move on the part of this popular firm will be appreciated by their friends as much as they appreciate the generous patronage which made the demand for larger quarters imperative.

The New Hawk-Eye Catalogue

Like its predecessors, the 1905 catalogue of Hawk-Eye cameras and supplies is brimful of interesting descriptive matter and illustrations, interspersed with prices that are most tempting. The Hawk-Eye cameras need no word of praise from us; even the makers' catalogue is modest in this respect. I would like to quote you a paragraph from the introduction on the second page of this catalogue. It reads as follows: The fortunate wayfarer possessing observation, sympathy, imagination and a Hawk-Eye has no trouble in reproducing beautiful and marvelous pictures of nature's skilful handiwork, with all the gradations of light and shadows. The budding and blossoming of trees, the flower-carpeted fields, the herds of cattle and sheep feeding in the newly green pastures attract his attention, kindle his enthusiasm, and with every new reproduction his admiration grows. He wanders along the bypaths from the open country into the woods, where unexpected glimpses of exquisite scenery are unfolded. The possessor of a camera is thus lured to health, gains knowledge and derives pleasure.

A New Photo Supply House

Under the firm name of Belle Photo Supply Company there has been opened an exclusive photographic supply house at 21 East Third South Street, Salt Lake City, where everything pertaining to the photographic trade, both amateur and professional, can be found. They have a very complete line, and would be pleased to quote prices. The firm is under the management of Charles F. Bellemere (late with the Salt Lake Photo Supply Company), who will be glad to meet all his friends. CAMERA CRAFT will, of course, be carried.

Announcement, C. P. Goerz Western Branch Office

We take pleasure in advising you that the Western Branch Office of the C. P. Goerz Optical Works, now opening, will be situated in the new Hayworth Building, corner of Wabash Avenue and Madison Street, Chicago,

Ill. We are glad that we have been able to secure in the heart of the shopping district so desirable a location which places our office within easy reach of all.

Our Western Manager, Frank Benson, will spare neither time nor efforts to make everybody feel at home, and to extend to all callers the greetings of the firm, while offering them an opportunity of getting information and of making better acquaintance with our full line of goods.

We hope our Western trade and customers will find this innovation a pleasant one, and, thanking them kindly for past favors, we bid them welcome in our new Chicago home.

An Interesting Exhibit

An exhibition of photographic studies, foreign and home, by Oscar Maurer, was held at the art rooms of Vickery, Atkins & Torrey, 236 Post Street, San Francisco, Cal., the week beginning Monday, May 8, 1905. It was most artistic and pleasing and met with the highest praise and commendation from the large number of artists and art patrons visiting the rooms.

Death of Edward W. Newcomb

It is with a feeling of deep sadness and an appreciation of our loss that we write of the death of our brother editor. Although Mr. Newcomb had been in poor health and confined to the house for about eight months, the death came as a great shock to his family, and will be received with deep sorrow and regret by his many photographic friends and admirers.

His columns of "Chat Here and There" in photographic magazines were bright, heart-to-heart talks and have been missed during the many months of his severe illness.

Mr. Newcomb's articles on the use of the nonhalation or backed plate drew attention to this important improvement. These articles have caused improvement in the manufacture of plates and of the general adoption of backed plates, either as backed by the manufacturer or backed at home before use.

Mr. Newcomb was an only son of the late Rev. Dr. George B. Newcomb, who for many years held the chair of psychology in the College of the City of New York. Mr. Newcomb will be sadly missed from the literary ranks of the photographic profession, and still more sadly by those who have known his bright, cheery, genial self.

